1154

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ART+COM INNOVATIONAL POOL,) Trial Volume 5
GmbH,   )
            Plaintiff,   )
) C.A. No. 14-217-RGA
v.   )
)
GOOGLE INCORPORATED,   )
)
            Defendant.   )

            Thursday, May 26, 2016
            8:31 a.m.
            Courtroom 6A

            844 King Street
            Wilmington, Delaware

BEFORE: THE HONORABLE TIMOTHY B. DYK,
         United States District Court Judge

APPEARANCES:

         FARNAN LLP
         BY: BRIAN E. FARNAN, ESQ.
         BY: MICHAEL J. FARNAN, ESQ.

              -and-

         BAKER & BOTTS
         BY: SCOTT F. PARTRIDGE, ESQ.
         BY: MICHAEL A. HAWES, ESQ.
         BY: LARRY G. SPEARS, ESQ.
         BY: TIMOTHY ROONEY, ESQ.

              Counsel for the Plaintiff

1155

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 1
      APPEARANCES CONTINUED:
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 3

 4         MORRIS, NICHOLS, ARSHT & TUNNELL
           BY:  JACK B. BLUMENFELD, ESQ.
 5
                   -and-
 6
           O'MELVENY MYERS, LLP
 7         BY:  DARIN SNYDER, ESQ.
           BY:  LUANN L. SIMMONS, ESQ.
 8         BY:  BRETT WILLIAMSON, ESQ.

 9                  Counsel for the Defendants

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1156

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 1                    THE COURT:  Be seated, please.  I

 2         have a couple of things to raise, but before I

 3         do that, does either side have anything to raise

 4         this morning?

 5                    MR. PARTRIDGE:  Yes, Your Honor.

 6         First, just to inform you of an agreement that

 7         Mr. Snyder and I just reached with respect to

 8         closing demonstratives.  We have agreed to

 9         exchanged demonstratives at 10:30 tonight and

10         objections by 11:30 tonight so that we're better

11         able to address any objections that we have by

12         tomorrow morning.

13                    This excludes a set of

14         demonstratives that have already been used in

15         the trial and the use of the transcript and

16         highlighting of documents and the like which is

17         already laid out in the pretrial order.  But we

18         have agreed to an additional exchange of things

19         that fall outside of that realm.  That's issue

20         number one.  And we agree to that.

21                    MR. SNYDER:  That is correct.  And

22         the things we have agreed that do not need to be

23         exchanged it would be call outs of the trial

24         transcript, jury instructions, and verdict form,
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1   to the extent that it's been finalized and

2   e-mailed in the final form.

3   MR. PARTRIDGE: And then we have a

4   second issue, Your Honor, with respect to one

5   demonstrative that Google is proposing to use

6   this morning. And Mr. Hawes will address that.

7   MR. HAWES: Your Honor, this

8   concerns slide 93 of their proposed

9   demonstratives.

10   May I approach?

11   MR. SNYDER: We were advised

12   consistent with what we told you last night, I

13   don't know if you have that version or not.

14   MR. HAWES: I'm happy to hand up

15   whatever version you want to use.

16   So, Your Honor, the issue we have

17   is as you know there has been a lot of

18   discussion of the date of the hypothetical

19   negotiation. And this slide actually shows the

20   negotiation occurring and has on these piles of

21   paper a number of events that occur after the

22   date that's been agreed on by the Court.

23   So, for example, the one to three

24   percent, the three to five million Euros, the $1

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 1      million maximum offer, the difficulties

 2      monetizing Earth, those are all things that

 3      occurred after the date of the hypothetical

 4      negotiation.

 5                   Now, no we have no problem with

 6      their expert saying those things are relevant,

 7      they come afterwards and explaining why they're

 8      relevant, but putting them on the table where

 9      the negotiation is occurring could confuse the

10      jury and suggest that those things had occurred

11      by the time of the hypothetical negotiation.

12                   We would request that the expert

13      just address those things through testimony so

14      it's clear to the jury because we're afraid this

15      slide will mislead the jury as to the timing of

16      these events or the hypothetical negotiation or

17      both.

18                   THE COURT:  I understand what

19      you're saying.

20                   Mr. Snyder.

21                   MR. SNYDER:  Thank you, Your

22      Honor.  There are three items on -- three labels

23      here that relate to negotiations between the

24      parties, the million dollar maximum offer, the
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1159

1   one to three percent nonexclusive license, the

2   three to five Euro compromise the sale, all of

3   those occurred in 2006.

4   In fact, the one to three

5   nonexclusive license offer was in January of

6   2006. So very close, very close in time to the

7   period when the hypothetical negotiation would

8   have occurred.

9   THE COURT: I don't think the

10   contention is that they're irrelevant, I think

11   the contention is that this makes it sound as

12   though those things occurred in 2005.

13   MR. SNYDER: Well, Mr. Reed will

14   make clear that these were his considerations,

15   not that these actually had occurred at 2005.

16   THE COURT: Why can't you redo the

17   slide to show considerations and not as though

18   these things are on the table in 2005.

19   MR. SNYDER: If we changed the

20   title, Your Honor, instead of results of

21   hypothetical negotiations, considerations in

22   hypothetical negotiation.

23   MR. HAWES: Your Honor, I'm still

24   concerned that the stuff on the table that shows

1   a negotiation happening is going to be

2   understood by the jury to be the things they had

3   at that time.

4   THE COURT: Why don't you take out

5   if you're able on each side there and relabel it

6   considerations for hypothetical negotiation.

7   MR. SNYDER: We can do that, Your

8   Honor.

9   THE COURT: Is that satisfactory?

10   MR. HAWES: Yes, Your Honor.

11   MR. SNYDER: Thank you.

12   THE COURT: All right.

13   MR. WILLIAMSON: Good morning,

14   Your Honor. There is one other matter. We were

15   advised last night that plaintiff's counsel

16   intended to question on cross-examination

17   Dr. Goodchild, the expert witness who is on the

18   stand, into his recollection of the patent trial

19   and appeal boards finding that certain testimony

20   offered in an interference proceeding is not

21   credible. And the justification for this was

22   that it somehow would be allowed under Rule

23   608(b), notwithstanding any relevance to this

24   case, that Ptab proceeding is different party,

1   different parties, different technology, has

2   nothing to do with this case.

3   THE COURT: We're not talking

4   about the testimony in this proceeding, we're

5   talking about the finding of this board?

6   MR. WILLIAMSON: Correct. A

7   finding of the board.

8   THE COURT: I'm not going to allow

9   findings by the PTO's board to come in here.

10   Mr. Spears, is there something you want to say

11   about that.

12   MR. SPEARS: I raised this issue.

13   THE COURT: Stand up.

14   MR. SPEARS: I'm sorry. I raised

15   this issue with Mr. Robinson anticipating the

16   Court may have strong views on it, I think what

17   I'm doing is allowed by Superior Court

18   precedent, but in light of where you are right

19   now, I think I would be wasting my breath

20   arguing it.

21   THE COURT: All right.

22   MR. WILLIAMSON: Just to be clear,

23   the question cannot be asked, that would be the

24   prejudicial part of it.

1162

1   MR. SPEARS: It will not be.

2   THE COURT: Thank you.

3   Anything else?

4   MR. SNYDER: I don't believe so,

5   Your Honor. There is one license that is on

6   plaintiff exhibit list, but I understand that

7   they do not intend to use it with Mr. Reed. If

8   it does come up for some reason we will want to

9   address this. It's a 2015 license. We think it

10   would be irrelevant and should not be put in

11   front of the jury.

12   MR. HAWES: I have agreed with

13   counsel if for some reason Mr. Reed's testimony

14   makes it important to use that license, I will

15   first raise it with Your Honor, I will not just

16   put it up.

17   THE COURT: Thank you.

18   I have three things. During

19   Dr. Goodchild's testimony yesterday, I noted

20   that there was some lack of clarity in places

21   about which documents he was referring to. This

22   happens frequently, now that we have all these

23   visuals in the courtroom, people lose track of

24   what the written record is going to look like.

1   I think there is three places in Dr. Goodchild's

2   testimony where that is unclear, and I would ask

3   if the parties could just stipulate as to which

4   exhibit he's referring to so we can have a clear

5   record and avoid having to run over the same

6   ground again with him.

7   MR. SPEARS: I anticipate, I fully

8   anticipate that will be possible because I think

9   the slide numbers are out in all cases in

10   Mr. Williamson's examination and we can refer

11   back to the slides to figure out exactly what is

12   being referenced.

13   THE COURT: I tell you the pages I

14   noted it at was 1138 and 1139 and then on 1140.

15   I don't know whether that same problem exist

16   with respect to other witnesses, I haven't gone

17   back to look at it, but I would suggest that all

18   counsel take a look at the transcript before we

19   close the record so if there is any lack of

20   clarity, it can be fixed.

21   MS. WILLIAMSON: I appreciate

22   that, Your Honor. And that's actually the

23   questioning attorney's fault. In this case,

24   that is me. I'm going to ask sort of a clean up

1164

1   question and just mention those exhibit numbers

2   and that should clear the record up.

3   THE COURT: Okay. The second

4   thing I have is the questionnaire forms provided

5   to me by the jury. Question is what should be

6   done with those after the record is closed? Is

7   there any reason to retain those? Did counsel

8   want them to be retained? Can they be disposed

9   of? Where are we on that?

10   MR. SPEARS: I can see no reason

11   why we would need those for the appellate record

12   or for the record for post-trial purposes. I

13   see no reason why the Court can't simply toss

14   them in the trash.

15   MS. WILLIAMSON: I agree. They

16   can be disposed of, Your Honor.

17   THE COURT: Okay. Thank you. And

18   my final concern is with the exhibits. I have

19   exhibits piled up next to me. There are about

20   two feet of them. I don't know how the jury, if

21   it wants to access them during deliberations, is

22   going to find them. I don't know if counsel

23   talked about this or have any suggestions.

24   There might be a variety of ways to handle that

1   including each side coming up with a list of the

2   exhibits that they think are important with

3   references to which volume they can be found in.

4   MR. SNYDER: I propose, Your

5   Honor, that we put together a single set of

6   binders that have only the admitted exhibits in

7   order. It would avoid duplication, so that --

8   we've been handing them out by witness, but we

9   can submit to the jury only a single set. And

10   we've also agreed that voluminous exhibits can

11   be submitted in electronic form on a locked

12   computer.

13   THE COURT: That sounds like a

14   good idea, but I'm not sure that's going to

15   solve the jury's problem of leafing through

16   those. There have been, I think, several dozen

17   exhibits admitted. I don't have a proposal, I

18   just suggest that you all think about it.

19   MR. PARTRIDGE: And normally

20   counsel work together to put together the

21   exhibit binders in just the way Mr. Snyder has

22   described, that our legal assistants will get

23   together and organize them and I think it's

24   easiest for them to find them and put them in

1   numerical order, Plaintiff's exhibits,

2   Defendant's exhibits so that they have binders

3   that enable them to easily flip to an exhibit

4   that they noted in their notes as being relevant

5   to an issue.

6   MR. SNYDER: We can also --

7   THE COURT: Okay. Well, go ahead.

8   MR. SNYDER: We can label the

9   binders so it identifies which exhibit ranges in

10   each one by number so they know which notebook

11   to look in.

12   THE COURT: That would be helpful.

13   I think what you're doing is good. I'm not sure

14   it entirely solves the problem, but if counsel

15   don't share my concerns I'm not going to impose

16   on you any other requirement.

17   MR. PARTRIDGE: The problem is

18   there is no way to achieve perfection in this

19   process so people are able to find things in a

20   way that are easier than what we used in the

21   past. I think our practices have been pretty

22   much the same to do it that way.

23   THE COURT: Okay. Unless there's

24   anything else, why don't we adjourn until 9

1167

1   o'clock.

2   MR. SNYDER: One other quick

3   thing, Your Honor. We had submitted an

4   application, a pro hac vice application of Mr.

5   Adam Conrad from the King Spaulding firm. I

6   don't know if we've gotten an order on that yet.

7   We would appreciate him being admitted pro hac

8   in this case so that he can attend the informal

9   charge conference this evening.

10   THE COURT: I'll check into that.

11   MR. SNYDER: Thank you, sir.

12   THE COURT: Thank you. We'll

13   resume at 9 o'clock.

14   THE COURT: Be seated, please. I

15   granted the pro hac vice motion.

16   MR. WILLIAMSON: Thank you, Your

17   Honor.

18   Should we have Dr. Goodchild take

19   the stand before the jury comes in?

20   THE COURT: Yes.

21   (Jury entering the courtroom at

22   9:00 a.m.)

23   THE COURT: Good morning, members

24   of the jury. We'll continue with Dr. Goodchild.

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 1        And I remind you you're still under oath.

 2                    Be seated, please.

 3     BY MR. WILLIAMSON:

 4            Q.   Good morning, Dr. Goodchild.

 5     Welcome back.

 6            A.   Good morning.

 7            Q.   For the benefit of the jury and

 8     the Court, I'm going to just recap the sort of

 9     end of your testimony where we left off last

10     night.  If we could look at slide 65, Mr. Ang.

11                    Slide 65 you displayed towards the

12     end of your testimony yesterday; correct?

13            A.   Correct.

14            Q.   And just to orient where you were,

15     have you reached a conclusion regarding whether

16     the SRI TerraVision system anticipates claim 1

17     of the '550 patent?

18            A.   Yes.  This chart gives the results

19     of my analysis of the SRI TerraVision system in

20     relation to claim 1 and my conclusion is that

21     the TerraVision system discloses each and every

22     element of claim 1.

23            Q.   And have you reached the same

24     conclusion based upon the analysis you went over
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1   with the Court, and that is that the SRI

2   TerraVision system anticipates dependent claims,

3   3, 14 and 28?

4   A.   Yes, I have.

5   Q.   If we go to slide 50.

6   Moving to the second legal basis

7   that we discussed yesterday afternoon, have you

8   reached a conclusion based upon your analysis

9   that you went over with the Court and the jury

10   yesterday as to whether or not the SRI

11   TerraVision system renders the claim 1 of the

12   '550 patent obvious?

13   A.   Yes.   This is the legal basis for

14   an obviousness conclusion.   And my conclusion is

15   that if -- and in my opinion there really are

16   not differences, but if there appear to be

17   differences between claim 1 of the '550 patent

18   and the TerraVision system, then I believe it

19   would have been obvious to one of ordinary skill

20   in the art at the time to have regarded those

21   differences as immaterial.

22   Q.   Let me first take the last part of

23   this, which is the person of ordinary skill in

24   the art.   Did you consider the definition that's

1170

1   been agreed to by the parties of a person of

2   ordinary skill in the art, this hypothetical

3   person that you talked about yesterday, as of

4   1995, in reaching your conclusion that you just

5   told the Court?

6   A.   Yes, I did.

7   Q.   And with respect to the

8   differences that as you testified to the extent

9   that there are any differences between the SRI

10   TerraVision system and the claims of the '550

11   patent, and in particular I'll ask you about

12   claim 1, did you compare any differences that

13   could possibly have been found by one of

14   ordinary skill with the disclosures, that is

15   compare the patent to the disclosures of the

16   elements of the SRI TerraVision system as

17   disclosed in the various documents you looked

18   at?

19   A.   Yes, I did.

20   Q.   For the record, those were

21   exhibits DTX 1023, 1036, 1037, 1087 and 1088?

22   A.   Yes.

23   Q.   And is your conclusion the same

24   with respect to comparing the differences

1171

1   between the '550 patent and the various

2   disclosures in the exhibits I just read you in

3   the eyes of one of ordinary skill as to

4   dependent claims 3, 14 and 28?

5   A.   Yes.

6   Q.   So I want to move to the second of

7   the two primary references that you talked about

8   yesterday as a basis for your invalidity

9   opinion. And if we go to slide 72, which

10   displace DTX 1001A, do you recognize this

11   document?

12   A.   Yes. This is the T-Vision

13   publication that was distributed at Siggraph 95.

14   Q.   Let's go to the next slide. Were

15   you here in the court to see the testimony of

16   Bernard Rous played to the jury?

17   A.   Yes. Yes, I was.

18   Q.   And had you already reviewed the

19   deposition testimony of Mr. Rous in doing your

20   investigation prior to the trial?

21   A.   Yes, I had.

22   Q.   Did you also listen to the

23   testimony of Mr. Lau relating to his attendance

24   at Siggraph 95?

1172

1   A.   Yes, I did.

2   Q.   And have you prepared a timeline

3   that helps illustrate your opinion based upon

4   the testimony of Mr. Rous and Mr. Lau?

5   A.   Yes, I have.

6   Q.   And what are we looking at at this

7   timeline?

8   A.   So this timeline is similar in

9   construction to ones you have seen before. On

10   the right-hand side is the filing date of the

11   patent application, which was 17 December 1996.

12   We have a one year grace period before that.

13   But the Siggraph meeting and the distribution of

14   the publication occurred several months before

15   the beginning of that grace period.

16   Q.   Why is that one-year period

17   important in your ultimate opinion regarding

18   whether the T-Vision publication renders invalid

19   the '550 patent?

20   A.   Because the relevant section of

21   the patent law which I have shown to you

22   specifies this one-year grace period.

23   Q.   So let me ask you now about your

24   specific opinion with respect to this T-Vision

1   publication, DTX 1001A. Do you have a summary

2   that shows how you're going to proceed with the

3   analysis for the jury's benefit?

4   A.   This will be a very similar

5   process from what we went through with the other

6   primary reference. One difference here is that

7   the publication was written by the same team as

8   wrote the patent application, and so not

9   surprisingly the language will be quite similar.

10   Q.   Turning to the first part of this

11   slide, let's go back for a moment. I'm going to

12   take you through each one of these,

13   Dr. Castleman. Let's move through the first

14   slide, the first part of claim 1 is the

15   preamble. In your opinion does the T-Vision

16   paper, DTX 1001A disclose claim 1's preamble?

17   A.   Yes, it does. The preamble, the

18   purpose is to describe the overall objective of

19   claim 1 and it talks about a repetition of

20   space-related data, and then in the highlighted

21   section of the publication it refers to an

22   either visualization projects, a virtual globe,

23   and an interface related to any kind of a

24   geographic region.

1174

1   Q.   Thank you, Doctor Goodchild. And

2   my partner points out to me that I've done sort

3   of the unforgivable and referred to you as

4   Doctor Castleman. I apologize.

5   A.   That's all right. I willing to

6   overlook it.

7   Q.   Please feel free to correct me at

8   any time. Doctor Goodchild, let's move on to

9   Claim element 1A, provide a plurality of

10   spatially distributed data sources for storing

11   space-related data. In your opinion, does the

12   T_Vision paper exhibit DTX-1001A disclose step A

13   of Claim 1?

14   A.   Yes, I've highlighted three

15   sections here and all of this talks about this

16   essential element of Claim 1A, which is the

17   spatially distributed database and that occurs

18   in the language in all these three places in the

19   T_Vision publication.

20   Q.   The first excerpt from the

21   T_Vision publication that you point to is a

22   worldwide distributed database. Did you

23   understand, based upon your work in this area,

24   as of 1995 or before, whether worldwide

1175

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1      distributed databases existed?

2               A.   Oh, yes, by 1994 we had the

3      internet and we had high speed electronic

4      networks all over the world and you saw

5      yesterday the Hibbard publication, which dates

6      from 1991, which talked about accessing data

7      over a high speed electronic network.

8               Q.   Was that fact known to people who

9      were working in this area?

10              A.   Absolutely.

11              Q.   Did you hear the testimony early

12     in the trial from some of the ACI inventors that

13     this particular feature of the T_Vision system

14     didn't implement a distributed database feature?

15              A.   Yes.  But my position here, my

16     opinion here is based on the publication, not on

17     the system itself, and it's quite clear in this

18     publication that that idea was part of the

19     T_Vision system, pardon me, yeah, the way the

20     T_Vision system was being envisioned.

21              Q.   Did any of the testimony of the

22     inventors change your opinion regarding whether

23     the T_Vision publication, that is Exhibit 1001A

24     discloses the element of Claim 1?
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1176

1   A.   No.

2   Q.   Step A of claim 1.

3   A.   No.

4   Q.   Let's move on to Step B of Claim

5   1.   In your opinion does the T_Vision paper

6   disclose the element B of Claim 1 of the '550

7   Patent?

8   A.   Yes. So Claim 1 B is about

9   defining the observer's position in terms of an

10   angle of view and a distance. And in the

11   quotation that I've picked out of the

12   publication here, you can see that, you can see

13   the language to the performer side it knows all

14   viewing and flight parameters like position and

15   direction.

16   Q.   And the next sentence, once

17   position and direction is known, what happens

18   according to the T_Vision publication?

19   A.   Then the data for the field of

20   view are requested and the publication describes

21   an appropriate level of resolution.

22   Q.   Doctor Goodchild, did you rely on

23   the disclosure in the T_Vision publication of

24   the phrase from the flight parameters like

1177

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 1        position and direction, the system calculates

 2        the currently needed data in reaching your

 3        opinion?

 4                 A.   Yes.

 5                 Q.   Let's move on to Steps C through

 6        E.   In your opinion, does the T_Vision paper

 7        disclose Claim 1 Steps C through E?

 8                 A.   Yes, so these three steps are

 9        concerned with requesting at that time a for the

10        field of view, centrally storing the data for

11        the field of view and representing the data for

12        the field of view in a pictorial representation.

13        And I've highlighted relevant sections from the

14        publication which talk about requesting the

15        data, obtaining the appropriate level of

16        resolution and integrate it into the user's

17        system, in other words, the locally stored.

18                 Q.   Let's move on to claim element F

19        and G of the Claim 1 of the '550 Patent.   In

20        your opinion does the T_Vision paper exhibit

21        DTX-1001A disclose Claims 1's Steps F and G?

22                 A.   Yes, so these two steps are

23        concerned with this process of going from course

24        defined, so F is about dividing, requesting,
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1   centrally storing and representing. And then G

2   is about repeating, as we've seen before. And

3   this illustration from the T_Vision publication,

4   which shows the area, the field of view being

5   divided so that we can obtain better resolution

6   data, in other words we can go from course

7   defined. And not surprisingly that illustration

8   from the T_Vision publication is very similar to

9   Figure 5 '550 Patent which appears on the right.

10   Q.   Are there any other parts of the

11   T_Vision publication, Exhibit 1001A that

12   describes Steps F through G of Claim 1?

13   A.   Yes, there are. So here I've

14   highlighted two sections, one describes seemless

15   links between different levels of detail

16   allowing continuous zooming, which is what

17   quadtree is all about. And then the bottom the

18   database is organized as a quadtree containing

19   high levels of detail to send down the tree, in

20   other words as you divide and then repeat the

21   process.

22   Q.   Based on the analysis that you've

23   had -- presented on Claim 1's elements what have

24   you concluded with respect to whether or not the

1   T_Vision publication, exhibit DTX-1001A

2   anticipates Claim 1 of the '550 Patent?

3   A.   So, I've concluded that the

4   T_Vision publication does indeed disclose each

5   and every element of Claim 1.

6   Q.   And we talked about the second of

7   the legal rules, that is Section 103A. Have you

8   reached a conclusion as to whether or not

9   disclosures in the T_Vision publication render

10   obvious the Claim 1 of the '550 Patent?

11   A.   Yes, I have. And once again, if

12   there are differences between the precise

13   language of the claims and the precise language

14   of the sections of the publication that I've

15   cited, then I believe it's obvious that one of

16   ordinary skill in the art would have seen no

17   important different between them.

18   Q.   And that's based upon your

19   understanding of what was known in the art

20   personally as well as applying this hypothetical

21   person of ordinary skill as of 1995?

22   A.   Yes, it is.

23   Q.   So let's move to the dependent

24   claims of the T_Vision publication and the first

1180

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1      is Claim 14, what's your opinion regarding

2      whether the ACI T_Vision publication discloses

3      Claim 14 of the '550 Patent?

4               A.   So the essence of Claim 14 is this

5      reference to a quadrant tree and in the

6      publication there is language and you can see

7      I've highlighted here which describes the use of

8      a quadtree and the idea of going from course

9      defined by descending down the levels of the

10     quadtree.

11               Q.   Let's move into Claim 28.  In your

12     opinion does the disclosure in the T_Vision

13     publication Exhibit 1001A disclose the same

14     subject matter as is set forth in dependent

15     claim 28 of the '550 Patent?

16               A.   Yes, it does.  As you can see in

17     this illustration from the publication, the

18     eventually image shown to the user will be a

19     composite of different tiles, different levels

20     of resolution and each of those tiles will be a

21     polygon and so the final display is in the form

22     of a grid of polygons.

23               Q.   If we go to slide 75.  With

24     respect to these two dependent claims, that is
```

1181

1   claim 14 and claim 28, have you reached a

2   conclusion as to whether or not by the

3   disclosures in the T_Vision publication

4   anticipate the '550 patent?

5   A.   I have. With respect then to

6   claims 1, 14 and 28, I have concluded that the

7   patent is invalid because those claims are

8   anticipated in the T_Vision publication.

9   Q.   If we go to slide 50, have you

10   reached a conclusion as to whether or not in the

11   alternative the disclosures of the T_Vision

12   publication render obvious the subject matter of

13   dependent claims 14 and 28 of the '550 patent?

14   A.   Yes. As I said, if it is

15   perceived that there are differences again the

16   T_Vision publication and the '550 patent, it's

17   my opinion that those differences would be

18   regarding as obvious and unimportant by anyone

19   having ordinary skill in the art.

20   Q.   Did you perform that analysis by

21   comparing any potential differences as you have

22   gone over with the jury between the disclosure

23   of the T_Vision publication and the claim

24   language of the '550 patent, claims 14 and 28?

1182

```
 1              A.   Yes, I did.

 2              Q.   Let's move to then slide 86,

 3      please.

 4                   Now, we're going back to talk

 5      about the final of the dependent claims, claim

 6      3.  I believe you testified yesterday and maybe

 7      you can remind the jury why you're addressing

 8      claim 2 as well as claim 3?

 9              A.   Yes, even though claim 2 is not

10      asserted in this case we need to nevertheless

11      need to consider it because claim 3 depends on

12      claim 2.

13              Q.   What is your opinion regarding

14      whether the T_Vision publication, Exhibit 1001A,

15      discloses claim 2 of the '550 patent?

16              A.   So what claim 2 is about is moving

17      the user's point of view, and the consequences

18      of that.  And in the T_Vision publication, there

19      is clear reference to having control over the

20      information to view, at what time and in what

21      location, and about how once the view changes,

22      the database will go through the Quadtree to

23      find the appropriate levels of detail.

24              Q.   So moving on then to the
```

1183

1   additional subject matter listed in dependent

2   claim 3, what is your opinion as to whether or

3   not the T_Vision publication discloses the

4   subject matter in claim 3 of the '550 patent?

5   A.   So claim 3 is about changing the

6   coordinate system, transforming coordinates from

7   one coordinate system to another. There is no

8   reference in the T_Vision publication to that

9   particular aspect, but in my opinion it would

10   have been obvious to one of ordinary skill in

11   the art, given that coordinate transformations

12   were well-known at the time, to have combined

13   the teaching of the T_Vision publication with

14   the global mapping patent which we talked about

15   yesterday.

16   Q.   And for the record that's exhibit

17   DTX 1076?

18   A.   Yes.

19   Q.   Go ahead, Dr. Goodchild.

20   A.   And in that patent there is clear

21   reference to the use of coordinate

22   transformations, and of course as I say the idea

23   of coordinate transformation dates for many

24   decades before the issuance of the patent.

1184

1   Q.   Have you reached a conclusion as

2   to whether or not the combination of the

3   T_Vision publication, exhibit DTX 1001A and the

4   global mapping patent, Exhibit 1076, render

5   obvious claim 3 of the '550 patent?

6   A.   Yes, in my view the combination of

7   the T_Vision publication and the global mapping

8   patent would have been obvious to one of

9   ordinary skill in the art and they would have

10   seen the essence of claim 3 as having been

11   disclosed by that.

12   Q.   What would have motivated this

13   hypothetical person in 1995 to have combined the

14   T_Vision publication and its disclosure with the

15   disclosures of this global mapping patent,

16   assuming that such a person would have known

17   about the existence of both of them?

18   A.   Yes. And although I'm not a

19   lawyer, I do understand when you make an

20   obviousness argument, it's necessary to argue

21   that the person making that connection would

22   have been motivated to do so.

23   And one of the standard ways of

24   demonstrating motivation is to show that the

1   combination would result from combining two

2   well-known bodies of art in a way that produced

3   a new technology that was more powerful than

4   either of them alone.

5   Q.   Then can you sum up for the jury

6   your final conclusion regarding the validity or

7   invalidity of the '550 patent in light of the

8   T_Vision publication as it relates to claims 1,

9   14 and 28, as well as the combination of the ACI

10   T_Vision publication with the global mapping

11   apparent as it relates to claim 3?

12   A.   Yes.   In my opinion the T_Vision

13   publication anticipates or renders obvious

14   claims 1, 14 and 28.   And the T_Vision

15   publication in view of the global mapping patent

16   renders obvious claim 3.

17   Q.   At the tomorrow just as a

18   reminder, can you again conclude with what your

19   opinion was with respect to the first of the

20   primary references?

21   A.   That SRI's TerraVision system

22   anticipates or renders obvious all of the

23   contested claims.   And remember that either of

24   these two opinions is sufficient to render the

 1   patent invalid.

 2   MR. WILLIAMSON: Thank you,

 3   Dr. Goodchild.

 4   I pass the witness, Your Honor.

 5   MR. SPEARS: And we have a few

 6   notebooks to hand out.

 7   THE COURT: Could counsel approach

 8   the bench, please.

 9   (Side-bar discussion:)

10   THE COURT: So yesterday

11   Mr. Spears objected to Dr. Goodchild's testimony

12   about obviousness, and I said that we will

13   complete hearing from the witness. The witness

14   has not said anything about secondary

15   considerations.

16   MR. WILLIAMSON: But that's not

17   our burden. It's a rebuttal case, that's the

18   burden of proof of the patentholder.

19   THE COURT: All right.

20   MR. SPEARS: Do you have your

21   notebook in front of you?

22   THE WITNESS: No.

23   MR. SPEARS: We're still handing

24   them out then.

```
 1                      Are we ready to proceed?

 2                      THE COURT:  Yes.

 3                      CROSS-EXAMINATION

 4   BY MR. SPEARS:

 5              Q.   Dr. Goodchild, technical experts

 6     like you and Dr. Castleman don't work for free,

 7     do they?

 8              A.   No.

 9              Q.   So ACI is being billed $400 an

10     hour for Dr. Castleman's services, you heard

11     that; right?

12              A.   I believe that was his testimony,

13     yes.

14              Q.   And Google is being billed $500 an

15     hour for your services?

16              A.   Yes.

17              Q.   And the fact that Google is being

18     charged for your services and ACI is being

19     charged for Dr. Castleman's services doesn't

20     mean that you're more qualified than

21     Dr. Castleman to provide opinions in this

22     matter; correct?

23              A.   Not at all.

24              Q.   Now, you heard Dr. Castleman
```

1   describe how he has been hired by the Patent and

2   Trademark Office to assist them in some

3   litigation against a gentleman named Gilbert

4   Hyatt. Do you remember that?

5   A.   I remember the reference to the

6   Patent and Trademark Office. I don't believe

7   the name of the person was mentioned.

8   MR. WILLIAMSON: Objection.

9   Relevance, Your Honor.

10   THE COURT: Overruled.

11   Q.   Have you ever been hired by the

12   Patent and Trademark Office to assist them as an

13   expert?

14   MR. WILLIAMSON: Objection.

15   Irrelevant, Your Honor.

16   THE COURT: Overruled.

17   MR. WILLIAMSON: And prejudicial

18   in light of the discussion.

19   THE COURT: Overruled.

20   A.   No, I have not.

21   Q.   Now, Dr. Goodchild, during your

22   direct examination, you spoke of a TerraVision

23   system that was developed by SRI International;

24   correct?

1189

```
 1              A.   Yes.

 2              Q.   Before getting into that system, I

 3       would like to talk about Stephen Lau, who was

 4       the witness who testified immediately before

 5       you.

 6              A.   Yes.

 7              Q.   You were here for that testimony;

 8       correct?

 9              A.   Yes.

10              Q.   And did you hear how just like you

11       are being paid by Google, Mr. Lau is also paid

12       by Google to assist them in this lawsuit?

13              A.   Yes, I believe so.

14              Q.   Did you also hear how about Lau

15       spent four years working on SRI TerraVision?

16              A.   I don't specifically recall that.

17              Q.   Did you also hear Mr. Lau tell the

18       jury that he wrote eighty to ninety percent of

19       the source code in SRI TerraVision?

20              A.   Yes, I remember that.

21              Q.   And when I asked Mr. Lau if he had

22       reviewed ACI's patent at a high level of detail,

23       did you hear him say, yes, I did that?

24              A.   I don't recall.
```

1190

1   Q.   In any event, instead of calling

2   Mr. Lau to the stand to compare SRI TerraVision

3   to ACI's patent, Google's lawyers chose to put

4   you on the stand to provide that testimony,

5   correct?

6   A.   Yes.

7   Q.   Now, you were familiar with SRI

8   TerraVision back in the 1990's, correct?

9   A.   Yes, I was.

10   Q.   And you knew some of the

11   developers of SRI TerraVision?

12   A.   Yes.

13   Q.   And today and yesterday you have

14   testified in effect that SRI had the invention

15   in ACI's patent before ACI did. Would that be a

16   fair high-level summary of your opinion?

17   A.   Yes.

18   Q.   Now, this opinion is one that you

19   formed only after Google hired you to work in

20   this lawsuit, correct?

21   A.   Until Google hired me to work in

22   this lawsuit, I was not familiar with the '550

23   Patent.

24   Q.   All right. That's what I thought.

1191

```
 1        Now, what identity like to do now is to focus

 2        you on some things that you wrote before you

 3        were hired to testify as an expert in this case.

 4        And to begin that process, I'd invite you to

 5        turn to tab -- to Plaintiffs trial exhibit 420.

 6                  A.   Yep.

 7                  Q.   Which you will find in the

 8        notebook that we've just provided you.  And is

 9        this a chapter that you wrote in a book that was

10        published in 2008?

11                  A.   Yes, it is.

12                  Q.    What I'd like to do now is to turn

13        to the conclusions that you stated.  Well, first

14        of all, the title of this chapter poses a

15        question, what does Google Earth mean for the

16        social sciences, correct?

17                  A.   Yes.

18                  Q.   I'd like to turn to the conclusion

19        also that you wrote on the second to last page

20        of this document.  Are you with me?

21                  A.   Yes.

22                  Q.    And you stated and I'm referring

23        to the second paragraph and I'll highlight some

24        text, that Google Earth and other geo browsers
```

     1   address what previous generations of developers

     2   had seen as insuperable challenges. Those

     3   previous generations would have included the SRI

     4   TerraVision developers, correct? You were aware

     5   of them when you wrote this, right?

     6   A.   Yes.

     7   Q.   And the insuperable challenges you

     8   go on to list are feeding vast amounts of data

     9   through comparatively limited internet pipes,

    10   correct?

    11   A.   Yes, but can we go back two

    12   questions, which I didn't answer one of your

    13   questions?

    14   Q.   I think you did and I'd like to

    15   proceed. And you go on to list a couple of --

    16   THE COURT: Let's let the witness

    17   answer.

    18   BY MR. SPEARS:

    19   Q.   Go ahead and explain, sir.

    20   A.   I think it was two questions back.

    21   Could you repeat it?

    22   Q.   What did you have in mind? I

    23   can't do that in my head.

    24   A.   There was something about previous

1193

```
 1        generations.  What I wanted to do is that was a

 2        rather vague term and you had linked it to a

 3        specific development which was SRI's

 4        TerraVision.

 5               Q.   Fair enough.  But at the time you

 6        wrote about previous generations of developers,

 7        you were aware of the work that had been done at

 8        SRI?

 9               A.   Yes.

10               Q.   And when Google solved the

11        insuperable problems that you've identified in

12        this paper, did they do it using the invention

13        in ACI's patent?

14               A.   No, I don't believe they did.

15               Q.   Okay.  Now, in 1998 Vice President

16        Gore made a speech to open the California

17        Science Center, correct?

18               A.   Technically Vice President Gore

19        did not deliver the speech.  It was written in

20        anticipation of his, that occasion, but he

21        actually didn't deliver it.  It was published on

22        the web.

23               Q.   And as part of the speech, Vice

24        President Gore laid forth his vision of the
```

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 1        digital earth, correct?

 2                  A.   Yes.

 3                  Q.   And from time to time you've

 4        written about that vision of Vice President

 5        Gore's, correct?

 6                  A.   Yes.

 7                  Q.   Could you turn with me to

 8        Plaintiff's trial exhibit 419, which you'll find

 9        behind the next tab in the binder?

10                  A.   Yes.

11                  Q.   And is this a paper that you wrote

12        in the year 2000?

13                  A.   Would have been written sometime

14        before 2000, but published in 2000.

15                  Q.   I'd like to take you to Page 352

16        of that paper.

17                  A.   Yes.

18                  Q.   And under the heading

19        communicating through digital earth, I'd like to

20        highlight some text.

21                  A.   Yes.

22                  Q.   You stated while elements of Vice

23        President Gore's vision are possible with

24        today's technology, the technical demands of his
```

1   proposal are massive?

2   A.   Yes.

3   Q.   And that's something that you --

4   that was published in 2000?

5   A.   Yes.

6   Q.   And you go on to state that DE --

7   and DE is digital earth, correct?

8   A.   Yes.

9   Q.   That it must handle no less than a

10   petabyte or 10 to the 15th bytes, which is well

11   beyond the storage capacity of any current

12   device. That's what you wrote in 2000?

13   A.   Yes.

14   Q.   Now, at the time that you wrote

15   that, were you aware of the fact that Art+Com

16   had solved this very problem five years earlier?

17   A.   Which problem are you referring

18   to?

19   Q.   The problem of dealing with the

20   memory limitations of a device like a PC or a

21   smartphone?

22   A.   What I said at the outset of this

23   paragraph was that the technical demands of the

24   proposal are massive. And later in the

```
 1      paragraph I said that the amount of data was

 2      beyond the storage capacity of any current

 3      device.  It doesn't follow that -- could you

 4      repeat the question?

 5              Q.   I'll withdraw the question.  Let's

 6      move on, sir.  What I would like to do is to put

 7      this goal in the context of what the TerraVision

 8      developers were attempting to do and to move

 9      that process along.  What I'd like for you to do

10      is turn to Defendant's trial exhibit 1023, which

11      you'll find in the notebook that we've provided

12      you.

13              A.   Yes.

14              Q.   And this is a copy of the SRI

15      International technical note 540 that you've

16      spoken of before?

17              A.   Yes.

18              Q.   I'd like for you to turn to the

19      very next page and I'd like to line that up

20      against what you wrote in your prior paper that

21      we just spoke of.  Now, here -- and I'll

22      highlight the relevant language -- the SRI

23      TerraVision developers set forth what is their

24      goal, correct?
```

1197

```
1              A.   Correct.

2              Q.   And the goal of the system is to

3    allow users to roam about a terrain comprising

4    tens of hundreds of gigabytes of data.  That was

5    their goal, correct?

6              A.   Yes.

7              Q.   Now, the petabyte of data that you

8    wrote about, that is a million gigabytes,

9    correct?

10             A.   Yes.

11             Q.   So in order to achieve what you

12   say is the minimum requirement for a digital

13   earth, TerraVision is going to have to do a

14   whole lot better than tens of hundreds of

15   gigabytes?

16             A.   Yes, but the approach they were

17   taking would have scaled.  The approach they

18   were taking, which was to leave the data on

19   distributed servers would have scaled up to the

20   requirement.

21             Q.   Okay.  And I think that

22   everyone -- well, I don't know if everyone in

23   this room, but most of the people in this room

24   now have a pretty good idea at how close SRI
```

```
 1        came to reaching that goal because we saw the

 2        video that Mr. Lau played of TerraVision during

 3        his testimony, correct?

 4             A.   Yes.

 5             Q.   And when Doctor Leclerc and his

 6        co-workers at SRI took a look at that video and

 7        contemplated what they had accomplished, they

 8        decided that it wasn't even worth going to the

 9        patent office to file a patent application on

10        that work?

11             A.   No.   As I recall Mr. Lau's

12        testimony, they declined to apply for patents

13        because they simply didn't believe that that was

14        an appropriate way to deal with the intellectual

15        property that they had developed.

16             Q.   In any event, Doctor Goodchild,

17        the reason that video looked the way it did

18        isn't just because of the graininess, it's also

19        because SRI TerraVision wasn't even close to

20        ACI's invention, correct?

21             A.   No.

22             Q.   Okay.   Do you remember putting up

23        this slide during your direct testimony?

24             A.   Yes.
```

```
 1                    Q.   In this slide lists the

 2        information that you've considered in

 3        evaluating --

 4                         THE COURT:  You have to -- the

 5        record is not going to be clear if you don't

 6        identify what the slide is.

 7    BY MR. SNYDER:

 8                    Q.   I'm sorry.  This was slide 49

 9        during your direct examination, correct?

10                    A.   Yes.

11                    Q.   And in -- this slide lists all of

12        the information that you've considered in your

13        analysis of SRI TerraVision, correct?

14                    A.   Yes.

15                    Q.   But one thing I noticed is missing

16        from this slide.  You reviewed the source code

17        for SRI TerraVision, correct?

18                    A.   I don't remember.

19                    Q.   You don't remember.  And in any

20        event you have not -- we all agree that source

21        code is the ultimate authority, correct?

22                    A.   Yes.

23                    Q.   And you've not provided -- you've

24        not shown us any source code illustrating what
```

 1   SRI TerraVision is capable of doing?

 2   A.   I believe that my opinion was the

 3   evidence that I relied on, which is shown here,

 4   was sufficient to support my opinion.

 5   Q.   And the first thing that you

 6   identified was that grainy video that Mr. Lau

 7   played during his testimony?

 8   A.   That happens to be first on the

 9   list.

10   Q.   And the second thing on this list

11   is the SRI technical note that we just took a

12   look at?

13   A.   Yes.

14   Q.   And the fourth item on that list

15   is a paper called an overview of the MAGIC

16   project whose principal author was Barbara

17   Fuller; correct?

18   A.   Yes.

19   Q.   And you relied upon that paper for

20   your understanding of what the SRI TerraVision

21   system did?

22   A.   I relied on all of these

23   materials.

24   Q.   Now, we have placed a copy of that

1201

```
 1        Fuller paper in your notebook, and it's

 2        Defendant's Trial Exhibit 1193.  And what I

 3        would like for you to do is turn to page three

 4        of the paper which is actually about five pages

 5        in, because there is a couple of preparatory

 6        pages.  Are you with me?

 7                  A.   Yes.

 8                  Q.   What I would like to do is put up

 9        the second full paragraph of that paper against

10        step 1A of claim 1 and the Court's claim

11        construction.  Are you with me?

12                  A.   Yes.

13                  Q.   And the paper states that for

14        TerraVision, the super computer, the thinking

15        machine will be located at MSCI, then we

16        highlighted that the database system, i.e., the

17        multiple servers of the ISS will initially

18        consist of three SPARstations co-located at EDC.

19        Do you see that?

20                  A.   Yes.

21                  Q.   EDC is a U.S. geological facility

22        in Sioux Falls, South Dakota?

23                  A.   Yes.

24                  Q.   And according to this paper the
```

1202

```
 1        database is co-located at that facility?

 2                A.   Yes.

 3                Q.   Now, I would like to take you

 4        through a couple of other things that Ms. Fuller

 5        had to say about your databases and networking

 6        capability.  And to start with, I would like you

 7        to move back two pages in the document to page

 8        one.  And do you see heading overview of the

 9        MAGIC project and there is an introduction

10        stated?

11                A.   Yes.

12                Q.   Just so that we're clear, what we

13        have done with this slide, the title information

14        doesn't appear on that page, but it does appear

15        on the cover of the document.

16                A.   Yes.

17                Q.   Now, I would like the highlight to

18        take you through some of the things that

19        Ms. Fuller had to say about the MAGIC project

20        back in December of 1993.

21                     She indicated that many challenges

22        must be addressed before the benefits of the

23        gigabit WANs can be achieved.  Now, WAN is a

24        wide area network; correct?
```

1203

```
 1              A.   Yes.

 2              Q.   She goes on to list four of these

 3      challenges; correct?

 4              A.   Yes.

 5              Q.   And she's writing in December of

 6      1993; correct?

 7              A.   Yes.

 8              Q.   And you have performed no analysis

 9      to determine whether any of these challenges

10      were ever addressed by Ms. Fuller in her

11      coworkers?

12              A.   I don't know.  This is an early

13      publication in the project.  It's December 1993.

14              Q.   Understood.

15              A.   The two demonstrations that

16      occurred were in 1994 and 1995.

17              Q.   Let's move forward four pages into

18      the document at page five.  Are you with me?

19              A.   Yes.

20              Q.   And under heading four, Ms. Fuller

21      sets forth some research issues; right?

22              A.   Yes.

23              Q.   And one of her research issues is

24      with the terrain visualization software, and she
```

1   is saying that two components of that terrain

2   visualization will have to be developed?

3   A.   Yes.

4   Q.   And then the next research issue

5   that Ms. Fuller identifies concerns architecture

6   for high speed scalable parallel distributed

7   storage system?

8   A.   Yes.

9   Q.   She identified these research

10   issues in a paper in December of 1993?

11   A.   Yes.

12   Q.   And I take it that you have done

13   no analysis to determine whether any of these

14   research issues were ever addressed by

15   Ms. Fuller or her coworkers?

16   A.   I don't know. What I do know is

17   the system demonstrated in 1994 and 1995 was the

18   system that I analyzed and that system as I

19   shown meets all the claims.

20   Q.   Now, I would like to put up your

21   slide 55 that was used during your direct

22   examination. Do you see that?

23   A.   Yes.

24   Q.   And here you have compared steps B

```
 1      and C of claim 1 to some disclosure that you

 2      have highlighted from Defendant's Trial Exhibit

 3      23 which is the SRI technical document that we

 4      looked at?

 5               A.   Yes.

 6               Q.   And you've highlighted some

 7      language that says as indicated above,

 8      TerraVision basically uses an incremental

 9      retrieval of the database as required by the

10      user.

11               Have I correctly read the language

12      that you have highlighted?

13               A.   Yes.

14               Q.   Now, this doesn't come out and say

15      what increment is being used to retrieve that

16      data, whether it's been done in increments of

17      field of view or some other type of increment,

18      it doesn't come out and say that; correct?

19               A.   Correct.

20               Q.   And the rest of the information

21      that you have highlighted refers to until he or

22      she has seen it from just the right point of

23      view.  That language that you have highlighted

24      doesn't talk about how a computer would go about
```

1206

```
 1        determining a field of view using information

 2        about objects and angles of view?

 3                  A.   As I've said, if there are

 4        differences that are perceived between the

 5        claims of the patent and the description of the

 6        TerraVision system, then I believe those

 7        differences would have been obvious to one of

 8        ordinary skill in the art.

 9                  Q.   Before I put up the next slide,

10        what I would like for you to do is return to

11        Defendant's Trial Exhibit 1023 in your notebook

12        and take a look at page 18.  Are you with me?

13                  A.   Yes.

14                  Q.   And what I have done here is to

15        line up what you're looking at against step C of

16        claim 1 of the patent.

17                  A.   Yes.

18                  Q.   We have highlighted some text that

19        says as indicated in the introduction, it is

20        necessary to pre-fetch terrain data before it is

21        actually required for rendering because of the

22        inherent delays in retrieving the data from the

23        database.  Do you see that?

24                  A.   Yes.
```

1207

1   Q.   In the video that was played

2   during Mr. Lau's testimony, did you hear the

3   narrator talk about predicting where the user is

4   going to go and pre-fetching terrain in response

5   to that prediction?

6   A.   Yes. And I also heard the

7   narrator talking about what would happen if the

8   user, I think the quotation was used the map

9   interface and was allowed therefore to select an

10   unpredictable location, and what would happen in

11   that case.

12   Q.   But in this instance with SRI

13   TerraVision is pre-fetching terrain and

14   predicting where it is going to go, it is not

15   requesting data for the field of view?

16   A.   I would point out this concept of

17   pre-fetching is an obvious way of speeding up

18   the process if it is possible indeed to predict

19   where the user view is going to move to and that

20   occurs in the specification of the '550 patent.

21   Q.   And this pre-fetching is the way

22   that SRI TerraVision works; right?

23   A.   No, not at all.

24   Q.   It's part of the way?

1208

```
 1              A.   This is part of the way.

 2              Q.   Okay.  Now, the next thing I would

 3      like to show you appears at page 15 of the very

 4      same reference.

 5              A.   Page 15.

 6              Q.   Are you with me?

 7              A.   Yes.

 8              Q.   And what I would like to do is to

 9      line up something in that text against step D,

10      centrally storing the data for the field of

11      view.  Under the headlining, pipelining of

12      search and rendering algorithms, the SRI

13      developers state the single color tile can then

14      be placed into a texture map memory, a special

15      memory that is part of the graphics hardware.

16      Do you see that?

17              A.   Yes.

18              Q.   That single color tile, that's not

19      necessarily data for the field of view; correct?

20              A.   I'm sorry, could you repeat the

21      question?

22              Q.   This reference to putting data for

23      a single color tile into a texture map memory,

24      that's not necessarily data for the field of
```

1209

```
 1        view; right?

 2                  A.   I think the intent here is that it

 3        would be part of the data for the field of view,

 4        yes.

 5                  Q.   But that's not what it says;

 6        correct?

 7                  A.   I think we would have to look at

 8        that quotation in context.

 9                  Q.   Fair enough.

10                  Now, I would like to move on to

11        the slide 59 that was put up during your direct

12        examination.

13                  A.   Yes.

14                  Q.   And here you're lining up some

15        text from, again, Exhibit 1023 against steps F

16        and G of claim 1 of the patent; correct?

17                  A.   Yes.

18                  Q.   And what I would like to focus on

19        is the -- is your bottom highlighting where

20        you're highlighting the phrase repeating this

21        until he/she has found the portion of the

22        terrain that is of interest.  Have I read that

23        correctly?

24                  A.   Yes.
```

1210

```
 1              Q.   And I take it that you have

 2    highlighted this text because it has the word

 3    "repeat" and you can line up that word repeat

 4    with repeat in step G and that's why you

 5    highlighted it?

 6              A.   Yes.

 7              Q.   Now, I would like to focus on the

 8    entire sentence that that phrase is a part of.

 9    And we have added some green highlighting and

10    that sentence phrase starts, TerraVision

11    basically uses an incremental retrieval of the

12    database as required by the user.  That's an

13    affirmative statement of what TerraVision does?

14              A.   Yes.

15              Q.   And then the sentence goes on to

16    say rather than, right?

17              A.   Yes.

18              Q.   And after the rather than, this

19    goes on to list stuff that TerraVision doesn't

20    do, correct?

21              A.   Yes.

22              Q.   And one of the things that

23    TerraVision doesn't do, because it comes after

24    the rather than, is the repeating this until
```

1211

1   he/she has found the portion of the terrain that

2   was of interest, the very language that you

3   highlighted and said disclose Steps F and G?

4   A.   No, not at all. I've considered

5   this English syntax very, very carefully. This

6   is not very clear syntax, and agree that section

7   rather than forcing the user to copy a part of

8   the database to local storage is indeed a moving

9   on in a different direction, but it's my opinion

10   that once we get to visualizing that part and

11   repeating this until he/she has found a portion

12   of interest, that now follows the first part of

13   the sentence rather than following the section

14   after the comma.

15   Q.   For syntax purposes is Canadian

16   English the same as American English?

17   A.   Yes.

18   Q.   Okay. Now, I'd like to move off

19   of TerraVision and move onto the T-Vision

20   publication, which you also addressed during

21   your direct examination. And before doing that,

22   I'd like for you to take a look at the patent at

23   issue in this lawsuit. And to do that you're

24   going to have to look at Plaintiff's trial

1212

1   exhibit 1, which is in the binder that Google's

2   lawyers provided you.

3   A.   This is --

4   Q.   Exhibit 1.

5   A.   Yeah.

6   Q.   And I'd like to move on to the

7   second page of the patent -- well, page 2,

8   because we have a cover, a page 1 and 2 and tell

9   me when you're there. I think you've gone past

10   it Doctor Goodchild. Start with the cover.

11   A.   Oh, we're thinking of the other

12   publication?

13   Q.   Yes.

14   A.   Okay.

15   Q.   Okay. And on Page 2 of the

16   patent, among other things we find a list of

17   references cited, correct?

18   A.   Yes.

19   Q.   And these are references that

20   would have been considered by the Patent and

21   Trademark Office when they decided to issue this

22   patent to ACI?

23   A.   Yes.

24   Q.   And on the second column, the

```
 1          second reference listed is the ACI TerraVision

 2          publication that you spoke about in response to

 3          your questions on direct, correct?

 4                    A.   Yes.

 5                    Q.   Now, so when you say that ACI

 6          T_Vision anticipates or renders obvious claims

 7          of ACI's patent, what you're basically saying is

 8          that the patent office got it wrong here,

 9          correct?

10                    A.   Yes.

11                    Q.   And this isn't the first time that

12          you've provided an opinion that the patent

13          office got it wrong, is it?

14                    A.   If you're referring to previous

15          occasions in which I've expressed the opinion of

16          invalidity, that would follow.

17                    Q.   You have appeared as an expert in

18          about 14 of these matters?

19                    A.   I have done a summary and I can

20          maybe help you there.  There are 18 cases in

21          which I've been involved in the last 12 years.

22                    Q.   Fair enough.  And about six of

23          those cases were for Google, correct?

24                    A.   And you used also the word appear.
```

1214

1   Only one of those cases has gone to trial.

2   Q.   Fair enough.

3   A.   Some of those cases have -- in

4   only I think 10 of those cases have I reached an

5   opinion. So appeared I think is a bit of a

6   stretch.

7   Q.   Understood. And thanks for the

8   clarification, sir. The matters in which you

9   have been retained, about six of those have been

10   for Google?

11   A.   I think precisely seven, including

12   this one.

13   Q.   Thank you for that clarification.

14   And I take it, Doctor Goodchild, that you can't

15   recall ever providing an opinion that a patent

16   you've been asked to analyze was actually valid?

17   A.   No, let me be precise there. I

18   have offered opinion on invalidity nine times

19   and on infringement once. That was this case.

20   Of those nine times, in one occasion my opinion

21   was that the patent was valid. In the other

22   eight, my opinion that it was invalid, of those

23   eight, three concerned the same set of patents.

24   So really I've provided an invalidity opinion

1215

```
 1        independently six times.
 2                    Q.   Is it the case, Doctor Goodchild,
 3        that you personally view the patent system as an
 4        impediment to creating and disseminating
 5        knowledge?
 6                    A.   Not at all.
 7                    Q.   We've put a copy of your
 8        deposition transcript in your binder.
 9                    A.   Uh-huh.
10                    Q.   And I would like for you to turn
11        to Page 18?
12                    A.   Is this now your binder?
13                    Q.   Yes, it's my binder.  That's what
14        I'm speaking about.  Actually I'd like for you
15        to turn to Page 17, to get this context.
16                    A.   Is this 17 as in the pagination as
17        it appears here?
18                    Q.   That's a good point.  It's Page 5
19        as it appears, Page 17 as it appears in the
20        transcript.
21                    A.   Got ya.
22                    Q.   Okay.  And at Line 23, did I ask
23        you -- are you with me, sir?
24                    A.   Yes.
```

```
 1              Q.   At Line 23 did I ask you have you

 2     ever applied for a patent on your work?

 3              A.   And I would have said no.

 4              Q.   And then on the very next page on

 5     page 18, I asked you, why is that?

 6              A.   Yes.

 7              Q.   And could you read aloud your

 8     answer to that question?

 9              A.   As a professor I believe it's my

10     task to create knowledge and to disseminate and

11     I see the patent system as somewhat of an

12     impediment to that process and that is a very

13     personal opinion.

14              Q.   While we're in your deposition

15     transcript I'd like to point out another point,

16     whether you actually reviewed source code for

17     SRI TerraVision.  And to do that could you turn

18     to Page 65 which is again in the deposition

19     transcript and not the raw exhibit.

20              A.   Yes.

21              Q.   At Line 18, are you with me, sir?

22              A.   Of page?

23              Q.   Page 65.

24              A.   Yes.
```

1217

1   Q.   At Line 18 I asked you, did you

2   rely on the SRI TerraVision source code for your

3   understanding of what TerraVision did before the

4   critical date for the '550 Patent and your

5   answer was?

6   A.   I think the source code was one of

7   many references that I looked at.

8   Q.   And even though you looked at that

9   source code, you did not share any of that

10 source code with the jury during your testimony

11 on direct?

12   A.   Correct.

13   Q.   Now, I'd like to talk some about

14 SIGGRAPH '95. SIGGRAPH '95 is a conference that

15 people go to to learn about the latest

16 developments in computer graphics, correct?

17   A.   Correct.

18   Q.   If you wanted to learn about the

19 latest developments in computer networking,

20 there were other conferences that you would have

21 gone to?

22   A.   Yes.

23   Q.   And it's your understanding that

24 the ACI TerraVision paper that you talked about

1218

```
 1        during direct examination describes the ACI

 2        TerraVision system that was under development by

 3        ACI?

 4                    A.   Yes.

 5                    Q.   And you heard Mr. Mayer testify

 6        that at least as of the time of SIGGRAPH '95,

 7        that system wasn't being used with a distributed

 8        database?

 9                    A.   Yes.

10                    Q.   That instead it was drawing data

11        from local memory like a hard drive?

12                    A.   There had been a number of

13        testimonies given at this trial on that

14        question.

15                    Q.   All right.  Fair enough.  But in

16        any event you heard Mr. Mayer say that at least

17        as of the time of SIGGRAPH '95, the system was

18        not being used with a distributed database?

19                    A.   To the best of my memory, yes.

20                    Q.   And do you recall that Mr. Schmidt

21        gave similar testimony?

22                    A.   No, I don't specifically remember.

23                    Q.   Okay.  In any event, you believe

24        that the TerraVision -- I'm sorry, that the
```

1219

1   T_Vision paper describes using a spatially

2   distributed data source even though the system

3   it was describing wasn't using them and even

4   though the conference that the paper was being

5   submitted to was all about computer graphics and

6   not about networking?

7   A.   That's a rather complex question.

8   I do believe that the T_Vision publication that

9   I relied on refers very clearly to the use of

10   distributed database connected with a network.

11   Q.   Okay.   Let's take a look at that

12   T_Vision publication.   And what I'd like for you

13   to do is to take a look at Plaintiff's trial

14   exhibit 1065 in the notebook that Google

15   provided you.

16   A.   Yes.

17   Q.   And I'd like to go forward to the

18   page that ends in bate stamp ending 313.

19   A.   Yes.

20   Q.   And under the heading Future of

21   The Planet, are you with me?

22   A.   Yes.

23   Q.   The T_Vision paper states that one

24   of the first things I will do is throw away the

1   code I have written for this prototype and

2   replace it with a real-object, full-feature

3   distributed high performance real database. Do

4   you see that?

5   A.   Yes.

6   Q.   Now, I would like -- so that's

7   what the ACI inventors put in this T_Vision

8   publication, correct?

9   A.   Yes.

10   Q.   Now, I'd like for you to turn four

11   pages back to the page that ends in bates label

12   309.

13   A.   Yes.

14   Q.   And this -- are we there?

15   A.   Yes.

16   Q.   Okay. And this is the page where

17   you have drawn the references to distributed

18   databases that you showed the jury during your

19   direct examination?

20   A.   I assume you're correct.

21   Q.   Okay. And the top of the page,

22   the heading that we find there, is T_Vision

23   Realtime Renderer, correct?

24   A.   Yes.

1221

```
1              Q.   So the disclosure on this page

2      relates to the renderer side of the T_Vision

3      application, then?

4              A.   Yes.

5              Q.   Now, I'd like to move on to, in my

6      slides, to --

7              A.   Can I just come back, though, to

8      your previous question?

9              Q.   I believe you've answered my

10     question and if you want to give some

11     explanation, then you can do that upon redirect,

12     sir.

13                  THE COURT:   Let's let the witness

14     complete his answer.

15   BY MR. SPEARS:

16             Q.   Okay.   Go ahead.

17             A.   The section that's drawn from is

18     headed the T_Vision Realtime Renderer.  Given

19     that that is a large part of the document, I

20     think it speaks to what the term renderer meant

21     to the writers of this document.

22             Q.   Okay.   Thank you for that

23     clarification.  Now, let's move on to your slide

24     75, which was put up during your direct
```

```
 1    examination.

 2               A.   Yes.

 3               Q.   And in all fairness, the red

 4    underlining, that wasn't our slide, that's

 5    something we've added.

 6               A.   Okay.

 7               Q.   Okay.  Now, with that in mind,

 8    what you're doing is lining up some text from

 9    the T_Vision publication against Step B of Claim

10    1, correct?

11               A.   Yes.

12               Q.   And the text that you've

13    highlighted starts on the performer side it

14    knows all viewing and flight parameters like

15    position and direction, right?

16               A.   Yes.

17               Q.   And then it goes to to say from

18    that it calculates the currently needed data.

19    And that's the language that we've highlighted?

20               A.   Yes.

21               Q.   Now, this doesn't come out and

22    tell you in any detail how that currently needed

23    data is calculated?

24               A.   No, not there.
```

1223

```
 1              Q.   And it doesn't tell you whether

 2      that data is calculated by determining a field

 3      of view; correct?

 4              A.   It tells you that since the

 5      position and direction of the viewing parameters

 6      are known, it would then follow that from the

 7      viewing parameters you would calculate the

 8      frustum and from that you would intersect it

 9      with the earth and calculate the currently

10      needed data.

11              Q.   And you read all of that into the

12      three lines of text that we have highlighted?

13              A.   I believe that one of ordinary

14      skill in the art as I defined it would have

15      attached that meaning.

16              Q.   Okay.  Just so that we're clear,

17      what you have said, it's not in the text, it's

18      something that you're reading into the text

19      based on what you think a person of ordinary

20      skill in the art would be?

21              A.   That's what I believe is the

22      relevant criteria.

23              Q.   Now, next I would like to put up

24      your slide 77.  And what you have done here is
```

1224

1   to line up some figure in the T_Vision

2   publication and a figure in the ACI patent

3   against claim elements F and G; correct?

4   A.   Correct.

5   Q.   Now, I would like to focus on the

6   figure from the T_Vision publication. Can you

7   do that?

8   A.   Yes.

9   Q.   And what we see here is basically

10   a bunch of rectangles that are being subdivided?

11   A.   Correct.

12   Q.   This figure doesn't tell you

13   whether sections are being subdivided based on

14   whether or not a desired image resolution has

15   been obtained, that's not in those boxes, is it,

16   sir?

17   A.   Not in the boxes, no.

18   Q.   Likewise, these boxes don't tell

19   you that after that subdivision is made we're

20   going to request higher resolution space-related

21   data for the smaller sections, you can't tell

22   that from those boxes, can you?

23   A.   You would understand that from the

24   way the diagram has been drawn.

1225

```
 1              Q.   That understanding is once again

 2        an example of your bringing the level of

 3        ordinary skill into interpreting what those

 4        boxes say?

 5              A.   Could we see the next slide, also?

 6              Q.   I'll take you to the next slide in

 7        just a second.

 8              A.   Okay.

 9              Q.   I'm just trying to figure out what

10        these boxes tells us about steps F and G?

11              A.   What I'm trying to figure out is

12        the larger case that I was making.

13              Q.   One more question about the boxes.

14        The boxes don't tell you when to stop dividing?

15              A.   The boxes, no.

16              Q.   Okay.  Is this a slide that you

17        wanted to see?

18              A.   I think so, yes.

19              Q.   And for the record this is slide

20        78 from your direct examination?

21              A.   Right.

22              Q.   And here you lined up other text

23        from the T_Vision publication against steps F

24        and G?
```

1226

1   A.   Yes.

2   Q.   And one of the phrases that you

3   have highlighted is seamless links between

4   different levels of detail allows the continuous

5   zooming?

6   A.   Yes.

7   Q.   Now, that highlighted text doesn't

8   talk about dividing sections that don't need a

9   desired image resolution, does it?

10   A.   It certainly implies it if you go

11   on to complete the sentence, from a global view

12   down to a recognizable feature of only a few

13   centimeters in size, the reader clearly is going

14   to conclude there is some structure here which

15   allows for continuous zooming by linking

16   together data.

17   Q.   You didn't highlight that?

18   A.   No, I was interested in

19   simplifying the case.

20   Q.   Now, if we pretend that you have

21   highlighted to complete the sentence, there is

22   nothing in there about desired image

23   resolutions, is there?

24   A.   No.

1   Q.   That's something you're reading

2   into that sentence?

3   A.   It's talking about recognizable

4   features, if the implication that is in order to

5   do that, the user would be interested in

6   recognizable features of only a few centimeters

7   in size.

8   Q.   Now, the text that you highlighted

9   here, it doesn't tell you when to stop the

10   process of dividing into smaller sections, does

11   it?

12   A.   No, I don't think one of ordinary

13   skill in the art would understand that there

14   would be a limit to the level of detail

15   available in the database, and that would be the

16   criteria.

17   Q.   So that's something that you're

18   reading into the text based on what you -- how

19   you think a person of ordinary skill in the art

20   would read it?

21   A.   And as I said very clearly in my

22   testimony, if there are differences between the

23   T_Vision publication and the language of the

24   '550 patent, then I believe that one of ordinary

1 skill in the art would have regarding those

2 differences as insignificant and obvious.

3   Q.   At the very bottom you have

4 highlighted the statement that the database is

5 organized as a Quadtree containing higher levels

6 of detail as you descend down the tree. Do you

7 see that?

8   A.   Yes.

9   Q.   That doesn't say anything about

10 dividing sections of an image using desired

11 image resolution as a criteria, does it?

12   A.   It mentions a Quadtree which is

13 clearly recognizable as a way of dividing the

14 image into smaller sections with improved

15 resolution.

16   Q.   But simply for the fact that you

17 use a Quadtree, that doesn't necessarily meaning

18 that you're using desired image resolution as a

19 criteria for the division; correct? There are

20 other criteria you could use?

21   A.   There are indeed.

22   Q.   Now, I would like to move on from

23 the validity issues in this case to the opinions

24 that you have given in connection with

 1   infringement. And to start that, I have put up

 2   slide 27 from your direct examination.

 3   A.   Yes.

 4   Q.   And in this slide, you are drawing

 5   a distinction between how the -- what the '550

 6   patent requires in step F, and what happens in

 7   the Google Earth products; correct?

 8   A.   Yes.

 9   Q.   And I believe that you describe

10   the process in step F as coarse-to-fine zooming,

11   did I hear that correctly?

12   A.   Yes, that phrase has been used

13   many times in this trial.

14   Q.   And it's been used in reference to

15   how step F of the patent operates, among other

16   things?

17   A.   Among other things, yes.

18   Q.   And you describe -- after

19   describing step F as implementing coarse to fine

20   zooming, you contrasted that with how data

21   structures -- I'm sorry, with how nodes are

22   traversed in the Google Earth products?

23   A.   Yes.

24   Q.   In the Google Earth products we do

1230

```
 1      not have coarse-to-fine zooming, at least in

 2      your opinion?

 3              A.   I think coarse-to-fine zooming

 4      appropriately describes what's going on on the

 5      screen.  I think I was clear about what the

 6      traversal process does.

 7              Q.   What I would like for you to do

 8      next is to turn to Plaintiff's Trial Exhibit 75,

 9      which you will find in the Google binder.  And

10      could you tell me when we get there?

11              A.   Yes.

12              Q.   This is a slide presentation;

13      correct?

14              A.   Correct.

15              Q.   And have you watched -- listened

16      to the video -- I'm sorry, watched the video

17      that corresponds to these slides?

18              A.   Yes, I have.

19              Q.   And you heard the narration that

20      goes along with them?

21              A.   Yes.

22              Q.   This slides and that video relate

23      to Earth and Google Maps; correct?

24              A.   Correct.
```

1231

```
 1              Q.    That's the version of Earth that

 2     you have referred to as Globe?

 3              A.    Correct.

 4              Q.    Could you turn to slide 38?

 5              A.    I don't think they're numbered in

 6     mine.

 7              Q.    I'm sorry.  I made a mistake.  I

 8     didn't mean to refer you to the slide in the

 9     Google binder, I meant to refer you to PTX 75 in

10     our binder, where you will find the page

11     numbers.  My mistake, Dr. Goodchild.  I should

12     have done that in the first place.

13              A.    Got you.  So slide 38.

14              Q.    38.  And please tell me when

15     you're there?

16              A.    Yes.

17              Q.    And slide 38 we are talking about

18     how request orders are proffered in globe;

19     correct?

20              A.    Yes.

21              Q.    And part of that involves

22     requesting a coarse-to-fine process; correct?

23              A.    Yes.

24              Q.    And on this slide we see some
```

1232

 1   nodes illustrated; correct?

 2   A.   Yes.

 3   Q.   And none of those nodes are being

 4   skipped; right?

 5   A.   In the Globe products, the

 6   prioritization is based on this measure of image

 7   quality, which is a different process from the

 8   criterion that's used in the other products.

 9   Q.   That's not the question I asked

10   you. I just asked you whether any of the nodes

11   that are illustrated in this slide are being

12   skipped?

13   A.   I think I need to understand the

14   context better by looking at some of the

15   previous slides.

16   Q.   I think I may be able to show you

17   some information that may provide some better

18   context, so I'll withdraw the question.

19   Now let's go back here to slide

20   27. And I take it your opinion that Google

21   Earth doesn't do the coarse-to-fine zooming in

22   step F because it is skipping some tiles from

23   time to time?

24   A.   The skipping of tiles is something

1233

1   that in my opinion is inconsistent with the

2   specification in step F. I'm not sure I

3   understand your question.

4   Q.   Okay. And I think you may have

5   answered it. The way that -- in drawing a

6   contrast between the way Google Earth works and

7   what's recited in step F, you have focused on

8   the fact that Google Earth will skip some

9   smaller sections?

10   A.   That's part of the argument, yes.

11   Q.   And that's the argument that you

12   were trying to make with slide 27; correct?

13   A.   Yes.

14   Q.   Now, you have not tested Google

15   Earth to see how often this happens, have you?

16   A.   No. In the animation that I

17   provided, I pointed out that because I'm using a

18   division into two rather than four and because

19   I'm only considering four levels in the tree

20   rather than up to 25, my expectation is that the

21   portion of nodes which are skipped in a

22   practical application is much larger than shown

23   in this animation.

24   Q.   But you've done no testing to

1234

1   quantify that?

2   A.   No.

3   Q.   You've seen no Google document

4   that quantifies that?

5   A.   No.

6   Q.   And Peter Birch didn't tell us how

7   often that happens when he testified, did he?

8   A.   I don't recall.

9   Q.   All right. Now, I'd like to talk

10   about where you have drawn -- your sources of

11   information that you presented the jury in

12   connection with this argument about skipping in

13   Step F, okay?

14   A.   Yes.

15   Q.   Okay. Now, the main resource that

16   you called out during your direct testimony was

17   this animation that Peter Birch prepared,

18   correct?

19   A.   No. This entire slide set was

20   prepared jointly between me and the attorneys.

21   I edited some of the slides. I reviewed them

22   many times. And I have no particular knowledge

23   about the relationship between the slides that

24   Peter Birch showed and the slides that I showed.

1   Q.   You were here for Peter Birch's

2   testimony, correct?

3   A.   I was.

4   Q.   And Peter Birch showed the jury

5   some animation that looks an awful lot like the

6   right side of Defendant's -- I'm sorry, of your

7   slide 27, correct?

8   A.   Indeed.

9   Q.   And in fact, that animation that

10   Peter Birch prepared is your basis for including

11   that diagram on the right side of slide 27?

12   A.   No. I think the reverse might

13   also be true, that the animation that I prepared

14   was the basis for Peter Birch's testimony.

15   Q.   Well, I think the jury can draw

16   its own conclusions about how much you relied on

17   this animation. Now, I'd like to talk to you

18   some about where Peter Birch's animation came

19   from. You recall him testifying that that

20   animation is not something that Google prepared

21   to describe Google Earth either to its employees

22   or to anyone else, that it was prepared for this

23   trial, correct?

24   A.   Yes, I think the context of this

1236

```
 1          trial made that particular animation appropriate

 2          and would not have been appropriate in the other

 3          context that you mentioned.

 4                    Q.    Insofar as you know, Peter Birch,

 5          who talked about this animation, didn't write

 6          any of the source code in the Google products?

 7                    A.    There was testimony from Mr. Birch

 8          on that matter, yes.

 9                    Q.    Okay.  And you've seen testimony

10          from a number of Google engineers who did write

11          the source code for Google's products, correct?

12                    A.    I'm not sure.

13                    Q.    Okay.  But in any event you've not

14          cited any testimony from anyone who wrote source

15          code for Google's products, correct?

16                    A.    I have said that I had frequent

17          consultations with many Google engineers.

18                    Q.    But you didn't cite to any of that

19          when you presented your opinions on infringement

20          to the jury, correct?

21                    MS. WILLIAMSON:  Objection.

22          Mischaracterizes the witness' testimony on

23          direct.

24                    THE COURT:  Could you repeat the
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1237

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 1       question?

 2                    MR. SPEARS:  Okay.

 3       BY MR. SPEARS:

 4             Q.   But you didn't cite anything that

 5       you learned from the software developers when

 6       you spoke to the jury on direct examination?

 7                    MS. WILLIAMSON:  Same objection.

 8                    THE COURT:  Are you talking about

 9       citing it in that list that you showed him or --

10                    MR. SPEARS:  I'm talking about

11       referring in any way.

12                    THE COURT:  Why don't you reframe

13       the question.

14                    MR. SPEARS:  Okay.  I'll reframe

15       the question.  In fact, I'll withdraw the

16       question.

17       BY MR. SPEARS:

18             Q.   Now, you've sat through the --

19       you've sat through Google's case during the

20       course of this trial?

21             A.   So far.  It's not completed yet.

22             Q.   And has Google, to this point,

23       called as a witness anyone who actually wrote

24       software for the Google products?
```

1238

1   A.   I couldn't say.

2   Q.   Now, I'd like to have your slide

3   28 pulled up. And is this the slide where you

4   set forth the source code files that you say

5   support your non-infringement position with

6   respect to Step F in this each issue?

7   A.   I believe so, I would have to

8   check that.

9   Q.   I think it is.

10   A.   Yes.

11   Q.   And we can clarify that on

12   redirect.

13   A.   So your question was?

14   Q.   In slide 28, you've laid out the

15   source code, the source code files that you

16   believe support your opinion as to why Google

17   doesn't practice Step F, at least as to this

18   each limitation?

19   A.   These are what I consider to be

20   the critical elements of source code, yes.

21   Q.   And after putting up this slide,

22   you've put up a slide that we'll get to later

23   that called out from source code from

24   lod-manager.js, the file on the bottom?

1239

```
 1              A.   Yes.

 2              Q.   But you didn't show us any -- you

 3      didn't call out any source code from any of the

 4      other seven files that are listed here?

 5              A.   No.  I wanted to show an example

 6      of the kind of areas of source code, that I

 7      didn't do that for each and every one of the

 8      groups of products.

 9              Q.   Okay.  Well, let's take a look at

10      the source code file that you did pull out.  And

11      I need to do our high tech -- there, now we're

12      secret.  And this is Defendant's demonstrative

13      exhibit 1003.1, which was a slide that you

14      talked about during your direct examination?

15              A.   Yes.

16              Q.   Okay.  And what you've highlighted

17      here is some comments from a file called

18      lod-manager.js, correct?

19              A.   Yes.

20              Q.   And the very first line of those

21      comments refers to something called okay imagery

22      quality threshold.  Do you see that?

23              A.   Yes.

24              Q.   I'd like to show you some more
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1240

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 1      source code from that very same file and to do

 2      that, what I'd like for you to do is to turn to

 3      Plaintiff's demonstrative exhibit 1034, which we

 4      have placed in your binder?

 5                A.   Yes.

 6                Q.   And this demonstrative exhibit is

 7      some additional source code that we have pulled

 8      from the file lod-manager, which you spoke of

 9      during your direct examination.  And do you see

10      on line 102 there's a reference to that okay

11      imagery quality that we spoke of in connection

12      with the slide that you presented?

13                A.   Yes.

14                Q.   And the comments above that say,

15      data with quality less than this will only be

16      loaded after all child data of higher quality

17      has been loaded, correct?

18                A.   Yes.

19                Q.   The comments go on to say, a value

20      of zero means load data course define correct?

21                A.   Yes.

22                Q.   How I'd like for you to go down a

23      couple of lines in that source code to line 299.

24                A.   Yes.
```

1   Q.   And there it says the default is

2   zero, which is course define?

3   A.   Yes.

4   Q.   And I believe we've established

5   that course define is our shorthand for

6   referring to the process of Step F of Claim 1?

7   A.   Yes.

8   Q.   So that the default operation of

9   these products, the operation that they are

10 going to do unless something else happens is

11 going to be course define?

12   A.   I have no basis to answer your

13 question. I would need to consider this in

14 great detail. This is a very complex piece of

15 code.

16   Q.   It looks pretty simple to me

17 Doctor Goodchild. You can't conclude it from

18 the source code we've just shown you?

19   A.   When you cite it like this, and

20 extract little pieces from it, it's very

21 difficult for me to understand the full context.

22 I'm not in a position to do that day.

23   Q.   Google's lawyers will have an

24 opportunity to provide you the full context on

1242

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 1      redirect examination, correct?

 2              A.   I don't know.

 3              Q.   All right.  Now, I'd like to move

 4      on in the slide set.  A little bit of

 5      explanation.  The reason that the kid in this

 6      slide doesn't look all that happy is that he's

 7      just been told that since he's failed 9th grade,

 8      he's going to have to repeat 9th grade.

 9              A.   Is this confidential?

10              Q.   Oh, good point, Doctor Goodchild.

11      No, it's not confidential.  Okay.  In any event,

12      he looks this way because he's been told that he

13      failed 9th grade and he's going to have to

14      repeat 9th grade.

15              A.   Okay.

16              Q.   Yes.  And before he repeats 9th

17      grade he's going to have to finish 9th grade,

18      right?  He can't be attending the makeup classes

19      at the same time he's attending the classes that

20      he's flunking, right?

21              A.   Right.

22              Q.   Okay.  Now, during the course of

23      your direct examination you spoke some about

24      restaurants and menus, do you recall that?
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 1               A.   Yes.

 2               Q.   Have there ever been times when

 3     you've made a repeat visit to a restaurant that

 4     you like?

 5               A.   Oh, several.

 6               Q.   Yeah.  And I take it that when you

 7     did that you finished your meal the first time

 8     around before you paid the repeat visit, right?

 9               A.   Yes.

10               Q.   And that's because generally in

11     order to repeat something you first have to

12     finish the thing that you're repeating, correct?

13               A.   Yes.

14               Q.   Yet Google, at least according to

15     you, seems to have discovered the secret of how

16     to repeat doing something that hasn't been

17     finished; right?

18               A.   I'm not sure I understand.

19               Q.   Well, step G in the patent says

20     repeat step F; right?

21               A.   Yes.

22               Q.   And it's your opinion that step F,

23     in the Google products, step F isn't finished

24     before we repeat it according to step G.  That's
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1244

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 1        what you're saying, isn't it?

 2                A.   No, I'm not sure it is.

 3                Q.   Okay.

 4                A.   So your question is that Google

 5      repeats step G before completing step F?

 6                Q.   Why don't I back up and ask the

 7      question a different way.

 8                     So is it your opinion that when

 9      Google says do step G, that they have already

10      completed the step F before they go into repeat

11      it.  Is that how it works?

12                A.   My argument here is that Google

13      Earth does not repeat step F as required by step

14      G.

15                Q.   And I can't -- I'm having a hard

16      time trying to keep this clear in my mind.

17                     So step G says repeat step F;

18      right?

19                A.   But I'm also of the opinion that

20      Google Earth does not perform step F.

21                Q.   Okay.  Understood.  But it's also

22      your opinion that they don't complete step F

23      before they get to step G?

24                A.   No, my -- I have two opinions
```

1245

1   here. One is that Google Earth does not execute

2   step F as required in the patent. And secondly,

3   that Google Earth does not repeat step F as

4   required by step G. So both F and G are off the

5   table.

6   Q.   In any event, your opinion as to

7   whether or not Google is repeating step F and

8   step G is once again informed by that animation

9   that was prepared by Peter Birch?

10   A.   No. As I said before, this was

11   not an animation prepared necessarily by Peter

12   Birch, it was prepared by me in consultation

13   with the attorneys.

14   Q.   Oh.

15   A.   The one I have shown.

16   Q.   Okay. So the animation that you

17   showed the jury was prepared in consultation

18   with Google's lawyers?

19   A.   It was prepared as a joint effort.

20   The whole series of slides was interrelated many

21   times between me and the attorneys.

22   Q.   So when you put up a slide and

23   says this is how Google Earth operates, that

24   slide was a joint production between you and the

1   Google lawyers?

2   A.   That slide was agreed by me as a

3   best of my knowledge an accurate representation

4   of how the process worked.

5   Q.   Do you know if the animation that

6   Mr. Birch showed the jury was a joint production

7   between him and the Google lawyers?

8   A.   I don't know how that process

9   occurred.

10   Q.   Now I'm putting up your slide 36,

11   where I believe you have listed the Google

12   source code that you believe supports your

13   opinion with respect to steps F and G?

14   A.   Yes.

15   Q.   And you've listed eight different

16   files here?

17   A.   Yes.

18   Q.   And you didn't take the jury into

19   a single one of those files to point out which

20   routines or variables actually support your

21   opinions with respect to steps F and G; correct?

22   A.   That would be an extremely complex

23   process. What I was anxious to do was to

24   present my opinion to the jury and to provide

1247

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 1        the appropriate evidence.  And it's my belief

 2        that taking them in detail through source code

 3        and talking about the meanings of variables

 4        would not have been particularly helpful.

 5                Q.   You were here for Dr. Castleman's

 6        testimony, were you not?

 7                A.   Yes.

 8                Q.   And during the course of that

 9        testimony, Dr. Castleman led the jury through

10        the Google source code and pointed out specific

11        routines and variables that support his opinions

12        as to how Google Earth infringes claim 1 of the

13        patent?

14                A.   It's my recollection that the

15        presentation involved the use of particular

16        files of code, the file names, the comments that

17        occurred in there.  I don't recall specifically

18        him talking about the meaning of variables.

19                Q.   And when Dr. Castleman was doing

20        that and when you were in the courtroom, were

21        you sitting there thinking, you know,

22        Dr. Castleman is just wasting the jury's time by

23        providing them with that information?

24                A.   No, I didn't have an opinion on
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1248

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 1        that.
 2                Q.   You spent about 200, more than 200
 3        hours in connection with this lawsuit?
 4                A.   To the end of April, I had spent
 5        250 hours.
 6                Q.   You have reviewed thousands of
 7        documents?
 8                A.   Yes.
 9                Q.   You have reviewed testimony from
10        dozens of witnesses?
11                A.   Yes.
12                Q.   And instead of providing the jury
13        with a detailed source code analysis, with a
14        detailed analysis of those documents or with
15        testimony from these witnesses who developed the
16        products, you chose instead to rely primarily on
17        an animation that you developed with Google's
18        lawyers?
19                A.   Not at all.  I believe that I
20        performed a very detailed analysis of the source
21        code, of the documents.  My interest in my
22        testimony was in presenting that information, my
23        conclusions to the jury in a way that could be
24        understood in a reasonable fashion.  My own
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1249

1   analysis was on the other hand extremely

2   detailed and extremely technical.

3   MR. SPEARS: Pass the witness.

4   REDIRECT EXAMINATION

5   BY MR. WILLIAMSON:

6   Q.   Dr. Goodchild, just two questions.

7   Based upon your review of the patents, the

8   patent and the Google Earth products as well as

9   your understanding of the field, are there

10   multiple different ways to do a coarse-to-fine

11   process?

12   A.   Yes.

13   Q.   Is the coarse-to-fine process, or

14   the extent to which there is a coarse-to-fine

15   process described in the '550 patent anything

16   new or novel in your opinion?

17   A.   No.

18   Q.   And does the process in the Google

19   Earth patent that goes from a blurry image and

20   results in a fine image, is that the same

21   process as in the '550 patent?

22   A.   No, it is not.

23   Q.   You were here in the courtroom for

24   Dr. Castleman's testimony; correct?

1250

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 1              A.   Yes.
 2              Q.   And you heard him go through a
 3    number of source code files that were thrown up
 4    on the screen and highlights in purple and
 5    yellow?
 6              A.   Correct.
 7              Q.   Did you agree with all of
 8    Dr. Castleman's analyses of that source code?
 9              A.   No.
10              MR. WILLIAMSON:   No more
11    questions, Your Honor.
12              THE COURT:   Anything further?
13              MR. SPEARS:   Nothing from the
14    plaintiffs, Your Honor.
15              THE COURT:   Let's see if the jury
16    has any questions for this witness.
17              Could counsel approach the bench.
18    There are a few jury questions.
19              (Side-bar discussion:)
20              THE COURT:   The first question is:
21    Did you look at the source code of early
22    versions of Google Earth, the year when it was
23    released, if so was the process of saving,
24    storing certain nodes present in this version?
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1251

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 1              MR. WILLIAMSON:  I think that's

 2    been established, both sides agree, it's always

 3    been the same.

 4              MR. SPEARS:  No, we have never

 5    heard of that.

 6              MR. WILLIAMSON:  Your expert did

 7    that.

 8              THE COURT:  Is there any objection

 9    to asking this question?

10              MR. SPEARS:  No objection.

11              MR. WILLIAMSON:  No objection.

12              THE COURT:  And the second one:

13    How does Google Earth show the smooth zoom if F

14    not performed.  Probably is if not performed.

15              How does Google Earth show a

16    smooth zoom if all steps -- no, if all steps of

17    F are not performed.

18              MR. WILLIAMSON:  I don't

19    understand the question.

20              THE COURT:  Let me try again.  How

21    does Google Earth show a smooth zoom if all

22    steps of F are not performed?

23              MR. SPEARS:  No objection.

24              MR. WILLIAMSON:  That's fine.
```

1252

1   THE COURT: Okay.

2   THE COURT: The jury had two

3   questions and counsel have no objection. I

4   think it's appropriate to ask the two questions.

5   The first is how does Google Earth show this

6   smooth zoom if all steps of F are not performed?

7   THE WITNESS: I think the answer

8   to that question has to do with the speed of

9   operation and the screen is refreshed 25 or 30

10   times a second. And so what the user perceives

11   as smooth depends on that refresh rate. Since

12   it's being refreshed 25 or 30 times a second

13   just like a movie, the user doesn't perceive

14   jerkiness in the screen. The idea of skipping

15   nodes is that we can get the data fast enough so

16   that the user wouldn't perceive jerkiness, but

17   if you've used Google Earth frequently, you'll

18   know that there is a certain possibility of

19   jerkiness, especially if this, if the device

20   you're using is small or if the internet

21   connection is not particularly fast, so you will

22   see first the course image and then you'll see

23   the process of refining the image. And that's

24   all a function of how rapidly the tiles can be

1253

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1    retrieved from the server and displayed on the

2    screen.

3                   THE COURT:  The second question is

4    did you look at source code of early versions of

5    Google Earth, the year when it was released?  If

6    so, was the process of skipping storing certain

7    nodes present in those versions?

8                   THE WITNESS:  So I think the

9    easiest way to answer that question is to refer

10   to testimony we've heard at this trial, that the

11   process that Google Earth uses existed at the

12   very first acquisition of Google Earth from

13   EarthViewer.  I think it was Mr. Birch's

14   testimony.  And that subsequent changes have not

15   materially changed the process, so I believe

16   that the process that I've described and that

17   Mr. Birch has described goes back to the

18   earliest Google versions of the Earth.

19                   THE COURT:  Counsel have any

20   questions?

21                   MS. WILLIAMSON:  No, Your Honor.

22                   MR. SPEARS:  None from Plaintiff.

23                   THE COURT:  Okay.  Thank you.

24   Thank you, Doctor Goodchild.  I assume he's
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1254

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 1         subject to recall?

 2                      MS. WILLIAMSON:  Yes, Your Honor.

 3                      THE COURT:  Okay.  For now you're

 4         excused.

 5                      MS. WILLIAMSON:  Your Honor,

 6         following the testimony of Doctor Goodchild,

 7         Google would move in, I believe these are all

 8         without objection from the parties' discussions

 9         prior, but that would be exhibit DTX-1184,

10         DTX-1187, DTX-1183, PTX-380, PTX-381, PTX-387

11         and that is all.

12                      MR. SPEARS:  No objection.

13                      THE COURT:  Without an objection,

14         the exhibits are admitted.

15                      MR. SPEARS:  Plaintiff's would

16         move into evidence Plaintiff trial exhibits 419

17         and 420.

18                      MS. WILLIAMSON:  No objection.

19                      THE COURT:  They are admitted.

20                      MR. SNYDER:  Your Honor, Google

21         calls as it's next witness Mr. Detlef

22         Andreovits.  Mr. Andreovits is the managing

23         director of the Plaintiff ACI and he is going to

24         testify about the company and some of the
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1255

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 1        interactions with Defendant Google.  His

 2        testimony will be by video and it lasts about 11

 3        minutes.

 4                   (Video playing.)

 5             Q.    What is your current title at

 6        ArtPlus.com?

 7             A.    Geschdftsf / hrer.

 8             Q.    And in English, what would that

 9        be?

10             A.    I think you could translate it as

11        managing director, but I'm not sure that there

12        are -- there might be some differences between

13        the word managing director and the German title

14        of Geschdftsf / hrer.  And there might be

15        differences in law and therefore I prefer

16        Geschdftsf / hrer because it's a German company

17        and it's a German title.

18             Q.    Which company are you managing

19        director of?

20             A.    Managing director of different

21        companies.  Different.  But one of them is the

22        ACI or the Art+Com Innovation GmbH.

23             Q.    How long have you been at ACI?

24             A.    At ACI?  I became Geschdftsf /
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 1        hrer I think in 2012.

 2                Q.   And in 2000 -- in around 2002 and

 3        2003 when ACI was first formed, how many

 4        employees did it have?

 5                A.   Zero.

 6                Q.   And how many directors?

 7                A.   One.

 8                Q.   And today how many employees does

 9        ACI have?

10                A.   Zero.

11                Q.   How many directors?

12                A.   One.

13                Q.   Okay.  Does it have a board of

14        directors?

15                A.   Pardon?

16                Q.   Does it have a board, a board of

17        directors, does ACI -- sorry.  Let me start

18        over.  Does ACI have a board of directors?

19                A.   If there's only one director?  I

20        don't understand the question.

21                Q.   Sure.  Let me ask about a -- a

22        better question then.  How many people are

23        associated with ACI?

24                A.   Associated?
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1257

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 1              Q.   Uh-huh.

 2              A.   This includes shareholders?

 3              Q.   Uh-huh.

 4              A.   ACI has 14 shareholders.

 5              Q.   Currently?

 6              A.   Yes.

 7              Q.   And one director?

 8              A.   Yes.  There's only one.

 9              Q.   Anybody else associated with ACI

10      other than the 14 shareholders and the director?

11              A.   I'm not sure whether -- what is

12      your meaning of association.

13              Q.   To say an example, types of people

14      who have -- I've just been asking about, like

15      employees, shareholders, directors, executives,

16      CEO's, anything like that?

17              A.   I think I answered it already.

18      One Geschdftsf / hrer, 14 shareholders, nothing

19      else.

20              Q.   You said that when ACI was

21      initially formed the primary purpose was to

22      develop software; is that correct?

23              A.   Uh-huh.

24              Q.   Does ACI currently develop
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1258

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 1      software?

 2              A.   No.

 3              Q.   When did it stop developing

 4      software?

 5              A.   As I can recall there has never

 6      been a real software development and therefore

 7      after, I think after one year they stopped this

 8      experiment and the ACI became hundred percent

 9      daughter of AC and, you know, nothing more.

10              Q.   And from 2003 onwards, what was

11      ACI's primary purpose?

12              A.   No purpose, other than -- not

13      really a purpose.  It was dormant.

14              INTERPRETER:  Yeah, dormant or

15      inactive.

16              THE WITNESS:  Inactive.  Inactive.

17      Because makes no sense to have a hundred percent

18      daughter.  Depends on your business strategy.

19      And that's not that big company.

20              Q.   Does ACI have any customers?

21              A.   ACI?

22              Q.   Uh-huh.

23              A.   Customers?  No.

24              Q.   Does -- so did the T_Vision
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 1        project ever evolve into a product, under your

 2        definition?

 3                  A.   As far as I know, no.

 4                  Q.   Handing you now -- hand you now

 5        Exhibit 9, which is bates number ACI --

 6        ACI_00001156 through 1157.

 7                  A.   Uh-huh.

 8                  Q.   This is now later -- an e-mail

 9        that's later in 2006, in September 13th of

10        2006 --

11                  THE COURT:  Can we stop the video

12        for a moment, please.  I think we need to take a

13        short break for the jury.

14                  (Jury exits.)

15                  THE COURT:  Okay.  Sit down,

16        please.  Anything before we break?

17                  MR. SPEARS:  No.

18                  MR. HAWES:  Your Honor, we have

19        actually have one issue that's arisen with

20        regard to the upcoming testimony of Mr. Reed due

21        to the testimony of Doctor Goodchild.

22        Specifically that is that Doctor Goodchild

23        submitted a report that had an analysis of the

24        technical comparability of certain agreements,
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1260

1   but he did not testify as to any of that and Mr.

2   Reed has in his slide analysis of those

3   agreements which under Federal Circuit case law

4   require that they be technically comparable and

5   we now have no evidence in the record that they

6   are.

7   THE COURT: Well, let's see

8   what -- is it Mr. Reed? What Mr. Reed has to

9   say about it.

10   MR. SNYDER: Mr. Reed will testify

11   that he talked to Dr. Goodchild and relied on

12   what Dr. Goodchild told him and he's allowed to

13   do that.

14   THE COURT: Okay. Let's break and

15   we'll resume at a couple minutes after 11:00.

16   Thank you.

17   (A brief recess was taken.)

18   THE COURT: Be seated, please.

19   Just a reminder when we get together for the

20   informal charge conference this afternoon you

21   should bring new versions of the verdict form

22   with you as well so that we can discuss that.

23   MR. HAWES: Your Honor, the issue

24   I raised before I have asked counsel, please

1261

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 1        give me an opportunity to object before any

 2        testimony about what Dr. Goodchild told Mr. Reed

 3        is elicited or before any of the agreements go

 4        on the screen.

 5                    THE COURT:  Okay.  Fine.  Ready to

 6        bring the jury back?

 7                    MR. SNYDER:  Yes, Your Honor.

 8                    MR. HAWES:  Yes, Your Honor.

 9                    THE COURT:  Why don't we do that.

10                    (Jury entering the courtroom at

11        11:03 a.m.)

12                    THE COURT:  Be seated, please.

13        Welcome back members of the jury.

14                    Let's continue with the playing of

15        deposition.

16                    (Videotape deposition testimony:)

17            Q.   ACI_00001156 through 1157.

18                 This is now later an e-mail that's

19        later in 2006, September 13th of 2006, from

20        Pavel Mayer to Michelle Lee?

21            A.   Yes.

22            Q.   Are you familiar with this

23        document?

24            A.   Yes.
```

1   Q.   Did Art+Com -- I guess, during

2   this time, did Art+Com communicate to Google or

3   discuss with Google the possibility of the

4   Art+Com patent being infringed?

5   A.   The Art+Com -- your question -- I

6   understand your question. Do Art+Com said to

7   Google, hey, you are infringing the patent.

8   Q.   Uh-huh.

9   A.   No.

10   Q.   I'm going to ask you a few

11 questions about TerraVision, the software. Were

12 there any efforts to commercialize or to sell

13 the TerraVision software, AC's TerraVision

14 software?

15   A.   To sell the software itself, no.

16 Not to my knowledge, no. Not really.

17   Q.   Were there any efforts to

18 commercialize the T_Vision project?

19   A.   Not for Art+Com.

20   Q.   Has Art+Com received any licensing

21 revenue from licensing the patent?

22   A.   Licensing the patent? No.

23   Q.   Did ACI ever attempt to sell the

24 TerraVision software?

1263

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 1              A.   ACI attempt to sell the

 2      TerraVision software.  No.

 3              Q.   Did Art+Com AG ever -- did any of

 4      the Art+Com entities attempt to sell the

 5      TerraVision software?

 6              A.   Attempt to sell the TerraVision

 7      software.  Very broad question.  Regarding this

 8      one, we have spoken the last hours, yes, because

 9      it is part of the package we talked about.

10              Q.   Okay.  Not the patent, but in

11      terms of the actual software as a product, did

12      it ever try and commercialize that by selling it

13      as -- to customers?

14              A.   As a product?

15              Q.   Yes.

16              A.   No.

17              Q.   As a product or a service?

18              A.   No.

19              Q.   Do you know if Art+Com was aware

20      of a TerraVision system from SRI International

21      in or around 1995?

22              A.   I have heard, yes.

23              Q.   And how did Art+Com first come to

24      know of a TerraVision system from SRI
```

1   International?

2   A. I can't tell you what was the

3   first, but I have knowledge that had at Siggraph

4   95 stand directly beneath Art+Com, and I would

5   be very interested.

6   Q. Exhibit 17, I'm handing you right

7   now. This is a document beginning date

8   ACI_00009690, ending on _000693. Are you

9   familiar with this document?

10   A. Not familiar, but I think I have

11   seen it before. I'm not familiar.

12   Q. It's an e-mail from at least on

13   this first page ending in 990, January 9th,

14   1995, from it says to Pavel Mayer from Yvan

15   Leclerc. It's discussing this whole first page

16   appears to be discussing the similarity between

17   SRI's TerraVision and AC's TerraVision. Is that

18   your understanding?

19   A. I have to read it. That's a lot

20   of stuff, you know, just to save some time,

21   what's your question.

22   Q. In this time, at this time as of

23   January 9th, 1995, is it accurate to say that

24   Art+Com was aware of SRI International's

1265

1   TerraVision system?

2   A.   Our understanding to be aware of a

3   system, as we can read in this document, we see

4   yes, they know there is a TerraVision.

5   (End of video).

6   MR. SNYDER: Your Honor,

7   defendants move into evidence PTX 339.

8   MR. HAWES: No objection, Your

9   Honor.

10   THE COURT: Without objection,

11   it's admitted.

12   MR. SNYDER: Thank you, Your

13   Honor.

14   Defendant Google calls as its next

15   witness Mr. Brett Reed.   Mr. Reed is an expert

16   in economic damages analysis and he is going to

17   testify to his opinion of what the appropriate

18   royalty would be if the patent is found valid

19   and infringed.

20   THE COURT: Okay.   Take the stand.

21   THE CLERK: Please state and spell

22   your name for the record.

23   THE WITNESS: Brett Reed.

24   B-R-E-T-T.   R-E-E-D.

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 1
 2                    BRETT REED, PH.D.,
 3              the deponent herein, having first
 4              been duly sworn on oath, was
 5              examined and testified as follows:
 6                    MR. SNYDER:  May I proceed, Your
 7    Honor?
 8                    THE COURT:  Yes.
 9                    DIRECT EXAMINATION
10    BY MR. SNYDER:
11              Q.   Good morning, Mr. Reed.
12              A.   Good morning, Mr. Snyder.
13              Q.   Could you please introduce
14    yourself to the jury?
15              A.   I'll be happy to.  My name is
16    Brett Reed.  I'm an economist from the Los
17    Angeles and I specialize in the analysis of
18    intellectual property at a company called
19    Competition Economics.
20              Q.   Mr. Reed, how long have you been
21    with Competition Economics?
22              A.   I and five other directors founded
23    the company about seven years ago.  So we were a
24    collection, the six of us, three are professors
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1267

1   from across the country and the others have

2   offices in California, both in the bay area and

3   my office in Los Angeles.

4   Q.   Mr. Reed, have you prepared a set

5   of slides to assist the jury in understanding

6   your testimony today?

7   A.   Yes, I have.

8   Q.   Mr. Reed, could you please

9   describe for the jury your educational

10   background?

11   A.   Yes.   I have a bachelors in

12   economics and geography from the University of

13   California Irvine. And I was in the Ph.D.

14   program at UCLA where I got a masters in

15   economics.

16   Q.   Have you done any teaching?

17   A.   Yes.   At UCLA I was a teaching

18   associate for two years while I was in the Ph.D.

19   program.

20   Q.   What did you do between the time

21   you left grad school and when you cofounded

22   Competition Economics in 2009?

23   A.   I worked in the same industry for

24   a different companies, about five different

1268

1   companies over the years, doing exactly the same

2   kind of analysis I do today which is the

3   analysis of damages issues, principally relating

4   to intellectual property and patent issues like

5   what we're hearing about here. And I have done

6   that for over thirty-two years.

7   Q.   Mr. Reed, have you authored any

8   papers or given any presentations in the field

9   of intellectual property damages?

10   A.   Yes, I've addressed valuation and

11   damages issues in intellectual property matters

12   in paper and at several conferences.

13   Q.   Mr. Reed, how many times have you

14   been qualified as an expert witness in damages

15   issues?

16   A.   Well, with respect to testimony in

17   trial or in hearings, it's about 50 times and

18   this slide shows some of the, some of the

19   companies in which I provided testimony relating

20   to or for these companies. And so for example

21   some of them relate to internet software, like

22   Dow Jones, the Neilsen company, Toyota actually

23   had to do with internet software for Toyota,

24   like. NewEgg, Netflix. And some of these

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 1        relate to display technologies like Panasonic

 2        and Vizio and even Jaguar/Land Rover that had to

 3        do with the displays in the Jaguar cars.

 4                Q.   What types of technology

 5        industries have you analyzed in previous cases?

 6                A.   Well, I just described a couple.

 7        Clearly subservers and computer equipment

 8        displays, televisions, other things like oil

 9        fill tools.  I also once worked on a matter

10        involving rate growing.  So a wide variety, but

11        mostly in the high tech space like what we see

12        here.

13                Q.   Have you testified at trial in

14        patent infringement cases before?

15                A.   I have for patent infringement

16        cases they are always in the U.S. District Court

17        like this one and this slide shows nine

18        different districts of U.S. District Court

19        across the country.  I've testified in each of

20        these districts and some of them, like the

21        Northern District of California, which is the

22        first one at the top, that there's three

23        courthouses in that district that I testified

24        in, San Francisco, San Jose and Oakland, the
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1270

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 1        home of the Golden State Warriors.  Also the

 2        Eastern District of Texas, I testified in four

 3        different courtrooms in that district.  And

 4        TexArkana, less well known cities, TexArkana,

 5        Tyler, Beaumont and Marshall.

 6                  Q.   In previous patent infringement

 7        cases, have you testified on reasonable royalty

 8        calculations?

 9                  A.    In every one of these U.S.

10        District Court cases on patent damages I'm

11        always addressing reasonable royalties,

12        sometimes also an issue called lost profits

13        I'll talk about later, but always I'm addressing

14        the reasonable royalty analysis.

15                  Q.   In the patent infringement cases

16        in which you've testified at trial, how many

17        times have you testified for Plaintiff and how

18        many times for Defendant?

19                  A.   It's the 20th time and it's

20        actually now 10 for Plaintiff and 10 for

21        Defendant.

22                  Q.   Let's turn to the work that you

23        did in this case.  Could you please describe for

24        the jury your assignment?
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1   A.   Yes, my assignment was to evaluate

2   the various information available in this matter

3   and to address the appropriate amount of damages

4   that would be due from Google to ACI in the

5   event that the patent is viewed by the jury to

6   be valid and infringed by the Google Earth

7   products that are accused here.

8   Q.   Do you have any opinion on the

9   validity or infringement of the asserted claims

10   of the '550 Patent?

11   A.   No, I'm an economist, so I'm

12   interested in the economic and the licensing

13   issues that -- the validity issue and

14   infringement issue are technical issues, so for

15   my analysis, I essentially assume that there's

16   been a determination about validity and

17   infringement. I make that assumption and then I

18   do the damages analysis.

19   Q.   Why did you make those assumptions

20   A.   Because that's a basic requirement

21   for the assessment of damages. And so in order

22   to assess damages, I assume that those technical

23   issues and go forward with the damages analysis.

24   Q.   In forming your opinions, what

1272

1   materials did you consider?

2   A.   I considered a wide range of

3   materials that were available that were produced

4   by the parties. And this slide provides an

5   example of much of this material. I considered

6   deposition testimony by ACI individuals and

7   Google individuals. I considered Google

8   marketing documents, financial documents and

9   metrics that address things like 7-day use,

10   30-day use activations, information like that.

11   I considered Google patent license agreements.

12   I considered a variety of ACI documents much

13   like what you've already seen in this trial. I

14   considered the expert reports submitted by both

15   damages experts and then also technical experts

16   on certain issues related to what I'll call the

17   more economic issues, the damages related

18   issues. I also had conversation with witnesses,

19   conversations, I should say, including Doctor

20   Goodchild and including several employees of

21   Google, including Mr. Birch, who you heard

22   testify live. Mr. Rokach, who you heard testify

23   by video and other Google witnesses as well.

24   And finally I've attended much of this trial and

1273

1   listened to the testimony here in the trial.

2   Q.   Mr. Reed, as an expert witness are

3   you paid for your time?

4   A.   My firm is paid for my time and my

5   billing rate on this matter is 540 per hour.

6   Q.   Did you work with anyone else on

7   this matter?

8   A.   Yes, my firm has individuals back

9   in our office who help me analyze some of these

10   issues, but the majority of our charges to

11   Google was for my time.

12   Q.   How many hours have you and your

13   staff billed or worked on this matter?

14   A.   Over 500 hours.

15   Q.   That's an awful lot of time. What

16   kind of work did you and your team do?

17   A.   Well, there was a lot of analysis

18   of the materials, reading depositions, analyzing

19   these documents, doing assessment of these

20   damages issues I'll be testifying about. Then

21   also I had to analyze and respond to the

22   analysis of ACI's damage expert, Mr. Nawrocki.

23   Q.   Mr. Reed, does your compensation

24   in this case depend in any way on the outcome?

1274

1   A.   No, not at all.

2   Q.   Could you please give the jury a

3   short summary of your opinions in this case?

4   A.   Yes. So I analyzed the issue of

5   damages and the appropriate form of damages as a

6   reasonable royalty. I analyzed the structure,

7   what that agreement should look like, what the

8   amount of the reasonable royalty should be and

9   the structure, my opinion as a lump sum paid up

10   license for the patent in suit here, so that

11   Google would make essentially a one time payment

12   and get a paid up license to the patent. The

13   hypothetical negotiation date is in mid 2005

14   when Google released the Google Earth product at

15   issue here and in my opinion the maximum amount

16   of the reasonable royalty is this lump sum of $3

17   million. And that covers the damages accounting

18   period that begins in July of 2010.

19   Q.   What do you mean by the damages

20   accounting period?

21   A.   Well, even though the hypothetical

22   negotiation is in 2005, that doesn't necessary

23   always tie to the time period in which a

24   Plaintiff would be entitled to damages. In this

1   case ACI is seeking damages beginning July of

2   2010.

3   Q.   What do you mean by the word, the

4   term damages?

5   A.   Well, damages under the patent

6   statute accompany that has had its patent

7   infringed is entitled to compensation, and it's

8   determined to be adequate compensation and but

9   in no event, not less than a reasonable royalty.

10   So damages address the question of compensation

11   and not less than a reasonable royalty.

12   Q.   What Google products are accused

13   in this case?

14   A.   I'll be repeating testimony that

15   you've heard, but they include Google version 7

16   and the predecessor versions going back to

17   Google Earth 3. The Google Earth for Android 8,

18   which is the most recent version for the Android

19   smartphones and then also Glove, which, as you

20   heard, is when, when Earth was added to Maps in

21   May of 2013. Those are the accused products as

22   I understand that.

23   Q.   For part of your analysis, did you

24   make the same assumption that Mr. Nawrocki did,

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 1        that the '550 Patent is valid and infringed?

 2               A.   Yes, again that's a basic

 3        assumption that's made by the damages experts in

 4        every matter.

 5               Q.   And what if the jury decides --

 6        what is the impact of your opinion if the jury

 7        decides that the asserted claims are not valid?

 8               A.   Well, if not valid, then damages

 9        analysis wouldn't be relevant at all, so there

10        would be no damages.

11               Q.   And what is the significance of

12        your opinion if the jury decides that the

13        asserted claims of the patent are not infringed

14        by the Google products?

15               A.   The same thing, if the jury

16        determines that the patent is not infringed,

17        then no damages would apply and the testimony of

18        the damages experts would not have relevance.

19               Q.   So let's move to your specific

20        damages analysis, Mr. Reed.  What form of

21        compensation did you decide was appropriate

22        here?

23               A.   I decided as did ACI's expert that

24        the appropriate form is a reasonable royalty.
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1277

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 1        And let me take a step back now and explain what

 2        I mean by this slide, lost profits or reasonable

 3        royalty.

 4                    In a patent infringement matter

 5        one of the things that has to be assessed for

 6        damages is the competitor relationship between

 7        the companies.  If both companies are selling a

 8        product and one company is alleged to use the

 9        patent of the other company, that could give

10        rise to one company making sales that otherwise

11        the patentholder would make.

12                    So what happens is the

13        patentholder in that case will lose sales and

14        revenues and lose profits and then you assess

15        the issue of lost profits.  And that is a very

16        significant factor sometimes when you have this

17        competitive relationship in a patent

18        infringement case.

19                    When you don't have that

20        competitive relationship, then you fall back to

21        this no less than a reasonable royalty.  And

22        that's what is applicable here.  So I addressed

23        the question of a reasonable royalty.

24             Q.   Does ACI disagree with your
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1278

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1      conclusion that the appropriate type of damages

2      award would be reasonable royalty?

3              A.   No.

4              Q.   What was the framework that you

5      used to come to your conclusion regarding a

6      royalty damages?

7              A.   Well, the framework again is the

8      same in all these matters when the reasonable

9      royalty question is addressed, we have this

10     framework called the Georgia-Pacific analysis or

11     the Georgia-Pacific factor of analysis.  And

12     this comes from a case from the 1980s that laid

13     out economic factors, licensing factors, that

14     can be evaluated, other factors could be

15     considered as well, but these factors can be

16     evaluated and considered to determine an

17     appropriate reasonable royalty.

18                  And then ultimately using that

19     structure, when can calculate a royalty.

20             Q.   What are the Georgia-Pacific

21     factors that you considered relevant in this

22     case?

23             A.   Well, I considered all of the

24     factors, but this is an indication of the
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1279

1   factors that have been viewed to be relevant for

2   the assessment of a reasonable royalty in this

3   case.

4   Again, these are economic and

5   financial issues that are helpful for the

6   assessment of a reasonable royalty.

7   Q.   The last item on this list refers

8   to a hypothetical negotiation. What is that?

9   A.   Correct. So the last factor

10   really takes into account these economic and

11   licensing factors in the context of this

12   hypothetical negotiation between the parties,

13   with the understanding that you would have a

14   willing licensor, ACI, and a willing licensee,

15   Google. And they're put in place like here

16   sitting at a table back at the time before the

17   first infringement, so this would be back in mid

18   2005. And they would be addressing the issues

19   to determine an appropriate royalty.

20   Q.   Why is it described as a

21   hypothetical negotiation?

22   A.   Because we assume that

23   hypothetically a solution would be met, that the

24   two parties would have got together back at this

1280

1   time, back in mid 2005 and actually come to an

2   agreement as to what a reasonable royalty would

3   be.

4   Q.   In analyzing the hypothetical

5   negotiation, what were the key dates that you

6   addressed?

7   A.   Well, first of all, when date is

8   the issuance of the A97 patent, the initial

9   patent, and that patent issued in August of

10   2000. The next date is the introduction of

11   Google Earth, which version 3.0, mid 2005, so

12   that would be the date of the first infringement

13   that's alleged here, and that would be the date

14   of this hypothetical negotiation.

15   And then I also considered the

16   July 2010 period when the damages accounting

17   period begins.

18   Q.   To analyze a hypothetical

19   negotiation in mid 2005, what are the first

20   Georgia-Pacific factors you considered?

21   A.   Well, these identify these first

22   factors are considered, the commercial

23   relationship between ACI and Google and then

24   ACI's policy on marketing, the way it was

1   addressing the potential licensing of its

2   patent, that's really the starting point I

3   considered.

4   Q.   Is this typically an important

5   factor?

6   A.   Yes. As I mentioned earlier, the

7   commercial relationship can be quite important,

8   especially if they're competitive firms and the

9   patented technology is important to the product,

10   then that gives rise to a consideration of a

11   larger royalty amount.

12   In the case where they're not

13   competitors, that will typically identify that

14   there will be lower royalties, so yes, it's an

15   important consideration.

16   Q.   What was the competitive

17   relationship between these parties, plaintiff

18   ACI and defendant Google?

19   A.   There is a noncompetitor

20   relationship. As you heard, Google is

21   introducing the product, ACI had stopped

22   activity with anything relating to the patent.

23   ACI didn't have a product as you just heard. So

24   they really have -- they don't have a

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 1           competitive relationship at all.

 2                     But there is -- there was a

 3           relationship that we heard about, and that is

 4           because in early 2006, I believe it was January

 5           2006, ACI sent a letter to Google, to Google's

 6           Mr. Jones, and identified that it would be

 7           willing to license the patent among other

 8           things.

 9                Q.   Did you consider as part of your

10           analysis those communications between the

11           parties?

12                A.   Absolutely.  That's an important

13           part of the ACI program, and also this

14           commercial relationship.

15                Q.   What was the first part, or the

16           first communication that you considered as part

17           of your analysis?

18                A.   Well, it's what I understand to be

19           the first communication with Google.  And that

20           was the January 2006 ACI letter.  I think it's

21           from Mr. Mayer to Mr. Jones, that attached to it

22           a document addressing a licensing proposal.

23                Q.   Is that DDX 1004?

24                A.   I see DTX 1003 on this slide, at
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 1        document number ACI 1094.

 2              Q.   Thank you.   I was looking in the

 3        wrong corner.   We are referring to DTX 1003.

 4                   What did you find significant

 5        about this communication?

 6              A.   Well, it's significant in many

 7        ways.   One is the timing.   This is January 2006,

 8        which is before these discussions that took

 9        place later in 2006.

10                   And what this page is indicating

11        is ACI suggesting that here is some patent

12        exploitation ideas and with typical licensing

13        models and they address an exclusive license

14        which would not apply here as I'll address in a

15        minute.   And then they also talk about a

16        nonexclusive license where they are suggesting a

17        royalty rate in the range of approximately one

18        to three percent that would apply to patent

19        related revenue.   So this is an important

20        consideration about this time of the

21        hypothetical negotiation.

22              Q.   What is the significance in your

23        opinion of the reference to a nonexclusive

24        license?
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1284

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 1              A.   Well, a nonexclusive license is

 2       the appropriate license in this case, because

 3       Google was not provided in this hypothetical

 4       negotiation with an option for an exclusive

 5       license.  Exclusive license would be much more

 6       valuable to a licensee like Google.  So this is

 7       a nonexclusive license, the hypothetical is a

 8       nonexclusive license, and that's what would be

 9       relevant for the assessment of a reasonable

10       royalty.

11              Q.   What is the significance in your

12       opinion to the reference to patent related

13       yearly revenue?

14              A.   What that is suggesting is a

15       royalty base that this royalty rate gets applied

16       to and the suggestion would be patent related

17       revenue, so that's a very, very important

18       consideration.

19              Q.   What was the next communication

20       between the parties that you considered?

21              A.   The next consideration was a few

22       months later when there was a suggestion by ACI

23       that perhaps they would sell the patent, not

24       license it, but sell it to Google for a price in
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1285

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 1    the range of 10 million Euros.

 2              Q.   Is that from Plaintiff's Exhibit

 3    206?

 4              A.   Correct.   PTX 0206.

 5              Q.   And what was the next

 6    communication between the parties that you

 7    considered?

 8              A.   The next communication was a

 9    response by Google that there was some interest

10    for reasons that you heard testimony about that

11    already, that there would be potentially

12    interest as a defense of patent in the patent

13    portfolio of Google and that maximum price

14    Google would be willing to pay was one million

15    to buy the patent.

16              Q.   Was that in Plaintiff's Exhibit

17    PTX 015?

18              A.   It's cut off here on mine.  Yes,

19    PTX 15.

20              Q.   What is the significance to your

21    opinion of the reference to buying the patent?

22              A.   Well, buying the patent would be

23    typically much more valuable to a company than

24    getting a nonexclusive license.  Buying a patent
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1286

1   is more -- is more closely akin to an exclusive

2   license.

3   Q.   Were there any communications

4   between the parties that were important to your

5   opinion?

6   A.   Yes. And then there was the

7   response in this next document which is DTX

8   1071, and this is an e-mail from Mr. Mayer to

9   Mr. Jones saying that there has been a

10   discussion with the board, and that as a

11   compromise, a price of three to five million,

12   and I believe the testimony from Mr. Mayer was

13   three to five million Euros, that that would be

14   a compromise price. Again, ACI would consider

15   selling the patent to Google.

16   Q.   What was the significance of these

17   communications to your opinion?

18   A.   Well, these indicate relating to

19   these Georgia-Pacific factors important

20   communications between the parties and

21   considerations back in the 2005-2006 time period

22   of what a reasonable royalty structure would be.

23   Q.   At the time of the hypothetical

24   negotiation in mid 2005, what was three to five

1   million Euros worth approximately in US dollars?

2   A.   In that time period it was

3   approximately 4 million US dollars to about 6

4   million US dollars.

5   Q.   Did Google and ACI ever enter into

6   a license?

7   A.   No.

8   Q.   Did ACI ever license any other

9   company under the '550 patent or its

10   predecessors?

11   A.   No. And we've heard testimony

12   that ACI sent a letter to Microsoft relating to

13   Microsoft's Globe product. They sent a letter

14   to Nokia. Nokia responded that it was not

15   interested. Microsoft did not respond at all.

16   There were also about three other

17   companies that ACI documents identify that ACI

18   believed that these other companies potentially

19   could be using the technology, but there is no

20   evidence that ACI reached out to those other

21   companies and certainly no evidence that there

22   was any communication or any license, there was

23   no license entered into by any other party

24   relating to this patent.

1288

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 1              Q.   Mr. Reed, what were the next

 2    Georgia-Pacific factors that you considered?

 3              A.   The next Georgia-Pacific factors

 4    go to the scope of the term and the scope of the

 5    license.  And these are the next considerations.

 6              Q.   And what would be the scope of the

 7    license?

 8              A.   The scope as I said is a

 9    nonexclusive license.  And so that would be

10    something sitting down at this negotiation the

11    parties would understand.  And then also it

12    would -- there would be an understanding about

13    the '550 patent or that original '897 patent

14    expiring in December of 2016.

15              And then also the understanding

16    ultimately that the damages period would begin

17    in July of 2010 with the negotiation taking

18    place back in mid 2005.

19              Q.   In your review of the materials,

20    did you see any evidence that ACI acknowledged

21    that a non-exclusive license would be less

22    valuable than an exclusive license?

23              A.   Yes, that original January 2006

24    proposal that we saw, I had on the slide a
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1289

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 1      moment ago, showed that for an exclusive

 2      license, the suggestion was three to five

 3      percent of revenue, but for the non-exclusive

 4      license it was a lower amount, one to three

 5      percent of revenue.  And that's an

 6      acknowledgment that a non-exclusive license is

 7      less valuable than an exclusive license.

 8              Q.   What is the next Georgia Pacific

 9      factor that you considered?

10              A.   The next would be royalty paid by

11      Google for comparable license agreements.

12              Q.   And what did you do to evaluate

13      this factor?

14              A.   Well, first I considered the

15      license agreements that were produced by Google

16      in this matter, having to do with other patents

17      that were licensed by Google from other

18      companies.  And then I considered the report and

19      my conversation with Doctor Goodchild, where

20      Doctor Goodchild addressed --

21                  MR. HAWES:  Your Honor, I object.

22      This gets into what we discussed previously.

23                  MR. SNYDER:  Mr. Reed is

24      identifying the material in which he relied.
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 1   THE COURT: Overruled.

 2   THE WITNESS: So I considered the

 3   report by Doctor Goodchild and my conversation

 4   with Doctor Goodchild about some of these

 5   license agreements that Doctor Goodchild viewed

 6   to be dealing with comparable technology to the

 7   technology associated with the patent here and

 8   in this case the '550 Patent.

 9   BY MR. SNYDER:

10   Q.   Now, let's start with the license

11   that you just referred to. What license did you

12   consider?

13   A.   Well, there are two licenses I

14   considered. One of them related to the

15   structure and the amount that was paid. And

16   then another license I considered related to the

17   licensing structure. And the first was this

18   agreement between Google and Stanford.

19   Q.   And why did you consider that

20   license?

21   A.   Well, for a variety of reasons,

22   including, including the point that Doctor

23   Goodchild raised, that there is a technological

24   comparability to the '550 Patent. And also

1291

1   considered certain economic and licensing terms

2   that indicated a similarity, important

3   similarities in comparability with respect to

4   economic and licensing aspects.

5   Q.   What factors did you consider in

6   concluding that it was economically comparable?

7   A.   Well, for example, that the -- to

8   some extent there was greater coverage with

9   respect to the Stanford agreement, because it

10   covered patent applications, multiple patent

11   applications, so not just one patent, and it

12   also covered other intellectual property. It

13   included Stanford information relating to

14   software, copyrights related to that software

15   and data. It also related to a similar area,

16   because it related to the Geo products. In this

17   particular case Stanford related to the

18   StreetView aspect of Google Maps.

19   Q.   And what did Google pay to

20   Stanford for that license?

21   MR. HAWES: Objection. Your

22   Honor, may I be heard on this point?

23   THE COURT: Yes, come up to side

24   bar.

1292

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 1                    (Side bar discussion.)

 2                    MR. HAWES:  Your Honor, they've

 3     already actually put it up on the screen before

 4     I had a chance to object, they actually put a

 5     number up on the screen.

 6                    THE COURT:  Okay.  Let's not do

 7     that.

 8                    MR. SNYDER:  It was the face.  We

 9     did not put any content from the license, but he

10     testified to the amount -- he testified that he

11     relied on Doctor Goodchild, his conclusion that

12     it was technologically comparable.  He testified

13     that it's economically comparable.  That's the

14     foundation that we have to lay.

15                    MR. HAWES:  Your Honor, there has

16     to be evidence that it's technologically

17     comparable before it can come into evidence.

18     That's Federal Circuit law.  He can testify

19     about a basis, but that's not evidence when he's

20     testifying about another expert's conversation

21     that is not subject to cross-examination.  They

22     chose not to put on Doctor Goodchild.

23                    THE COURT:  What case does this

24     rely on, the opinions of another expert?
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1293

1   MR. HAWES: Your Honor this came

2   up this morning. We expected Doctor Goodchild

3   to testify because he had a report. I have not

4   been able to research it, but the distinction is

5   an expert can rely on another expert as a basis

6   for an opinion, but what he relies on is not

7   itself evidence, only his final opinion is

8   evidence.

9   THE COURT: Well, then you'll have

10 an objection to the it in the record, but -- if

11 the record is incomplete, you have a basis for

12 argument, but I'm going to let him testify to it

13 and we'll see later on, you know what that, the

14 value of the testimony is.

15   MR. HAWES: Can I clearly state my

16 objection?

17   THE COURT: Yes.

18   MR. HAWES: My objection is to the

19 license being shown to the jury prior to there

20 being evidence in the record that it is

21 technically comparable to the patent at issue.

22   THE COURT: Okay.

23   MR. HAWES: Thank you.

24   (Side bar discussing ended.)

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 1    BY MR. SNYDER:

 2              Q.   Mr. Reed, what did Google pay

 3    Stanford for that license?

 4              A.   Google paid a lump sum paid up

 5    amount of $600,000.

 6              Q.   What factors did you consider

 7    related to this license?

 8              A.   Well, I considered, as I mentioned

 9    a moment ago, a variety of different factors.

10    One is first the structure of the agreement.

11    That was a lump sum paid up amount, paid by

12    Google to Stanford.  And that is similar to the

13    form of the structure that I believe is

14    appropriate for the reasonable royalty here that

15    Google should pay ACI in the event the jury

16    finds the patent to be infringed.  Also I

17    considered patents and products.  Both of these

18    patents, the Stanford and the ACI would

19    potentially relate to Geo prodcuts, StreetView

20    and Earth and then Globe in case of ACI.  They

21    were viewed technically comparable by Doctor

22    Goodchild.  I also considered other product

23    functionality and both Earth and StreetView

24    would have a lot of different technology related
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1295

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 1        to providing that functionality to consumers

 2        like us.  And so there are many other features

 3        and functionality in those products besides just

 4        one particular patent that would be at issue.  I

 5        considered the commercial relationship.  Both of

 6        these companies didn't have -- I'm sorry, one

 7        company and one institution of higher learning,

 8        Stanford, neither of them had commercial

 9        products in the geo space.  They were both

10        companies licensing the technology to another

11        company and then the time of the license

12        agreement, the Stanford agreement was entered

13        into 2007, one of the patent applications that,

14        in fact, was licensed to Google under exclusive

15        terms, that's more valuable, that patent issued

16        in 2011 and would cover a period similar to the

17        period for the damages analysis here.  And then

18        finally I also considered negotiating -- the

19        negotiation conditions and both of these parties

20        are willing licensors.  Stanford willingly

21        entered into this agreement and in the

22        hypothetical negotiation the understanding is

23        ACI would be a willing licensor and Google would

24        be a willing licensee.
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          1   Q.   Were there any differences between

          2   the Stanford license and the hypothetical

          3   negotiation that you considered?

          4   A.   Yes.   One difference I already

          5   mentioned, that this patent license from

          6   Stanford covered an application that became a

          7   patent, and Google had exclusive rights to that

          8   patent.   Also Google had rights to software and

          9   data from Stanford and then -- and those both

         10   would make the amount for the Stanford agreement

         11   otherwise be relatively more valuable, but

         12   there's another consideration and that is the

         13   presumption I talked about in the beginning, the

         14   assumption that the parties would have that the

         15   patent, the ACI patent would be valid and

         16   infringed and that would be an understanding

         17   that if the product was introduced after this

         18   negotiation, that the '550 Patent would be

         19   viewed to be infringed and the parties would

         20   understand that.   And that's different than a

         21   situation between Stanford and Google.   The

         22   parties there wouldn't necessarily understand

         23   that the patent would definitely be invalid and

         24   be infringed, so that's a factor that would

1297

1   suggest greater value for the ACI and that's one

2   of the reasons why when I performed a check on

3   this analysis, my understanding would be that

4   the amount of the reasonable royalty should be

5   larger than the amount that was paid to

6   Stanford. And so at the end of the day, when I

7   compare my $3 million reasonable royalty figure

8   to the 600,000 figure, I believe that's

9   consistent.

10   Q.   What other licenses did you

11   consider as part of your analysis?

12   A.   Well, for purposes of assessing

13   the structure of or the form of the license

14   agreement, I considered the Stanford agreement,

15   but also another agreement between Google and a

16   company called Skyline.

17   Q.   And what structure did the Skyline

18   agreement use or what structure did both of

19   those agreements use?

20   A.   Both of these agreements used a

21   lump sum paid up structure and the documents I

22   relied on are DTX-1040 for the Stanford

23   agreement and DTX-1055 for the Skyline. They

24   are both from the time period around 2007. And

1298

1   they both use what is Google's preferred

2   structure of a lump sum paid up structure.

3   Q.   Could you remind the jury what a

4   lump sum paid up structure means?

5   A.   Sure. It means that the licensee,

6   Google in this case, would at the very beginning

7   of the agreement, pay a lump sum paid up amount,

8   in the case of Stanford $600,000, paid up front

9   and that would cover the term of the patent and

10   so no additional payments would be made by

11   Google.

12   Q.   Why did you conclude that a lump

13   sum paid up structure was the appropriate

14   structure in this case?

15   A.   Well, those two agreements that I

16   considered are just part of the reason I

17   concluded that. I also considered testimony by

18   Google employee Mr. McCowan, who testified that

19   Google has entered into over 100 license

20   agreements for patents and it's noted here in

21   the bottom box, 100 patent license agreements

22   that will have a lump sum structure. Google has

23   a very strong preference for the lump sum

24   structure for a variety of reasons listed here

1299

1   with the bullets. It's advantageous from a

2   confidentiality standpoint. The calculation of

3   running royalties can be quite difficult, trying

4   to measure things like usage is quite different.

5   The freedom to operate from a lump sum license

6   agreement is useful and also it provides

7   certainty, you know, what you're going to be

8   paying and the total amount that's going to be

9   paid.

10   Q.   How did the parties' discussions

11   during 2006 effect your conclusion that the

12   appropriate structure would be a lump sum fully

13   paid up license?

14   A.   Well, also the -- the ACI

15   suggestions included a lump sum paid up

16   structure and the discussions about the sell of

17   the patent also focused on one time in a sense

18   lump sum amounts.

19   Q.   What is the next factor, Georgia

20   Pacific factor that you considered?

21   A.   The next factor relates to

22   apportionment, so it goes to a question of the

23   portion of the profits based on a contribution

24   by the parties and how one could consider, for

1   example, Google's other contributions to Google

2   Earth for determining how to apportion revenue,

3   for example, determining a royalty.

4   Q.   What did you do to evaluate this

5   factor?

6   A.   I considered Doctor Goodchild's

7   analysis as well as my analysis of the provided

8   information about Google Earth. And one of the

9   things I considered is Doctor Goodchild's

10   assessment of all the different functionality

11   that existed in Google Earth that goes well

12   beyond the technology that's asserted here by

13   ACI.

14   Q.   And how large is Google's

15   investment in Google Earth?

16   A.   Google Earth had quite a large

17   investment relating to hardware servers,

18   relating to acquisition of data, using

19   satellites and planes and acquiring information

20   relating to images, so it's a very significant

21   investment you heard about. And this line also

22   addresses Doctor Goodchild's views about the

23   additional functionality that Google Earth has

24   that goes beyond the asserted technology here.

1   Q.   And what was some of that

2   functionality?

3   A.   Well, it's identified here in this

4   slide. There is functionality like local

5   searching capability. There is functionality

6   like the driving directions and navigation that

7   are included in Google Earth. Also presenting

8   ads to users. And these are examples of some of

9   additional functionality that Google contributes

10   clearly along with all the data and all the

11   images as part of Google Earth.

12   Q.   What were the next set of

13   Georgia-Pacific factors that you considered?

14   A.   The next factor, factors are a

15   group of factors that relate to issues like

16   profitability and popularity of a particular

17   product here, talking about Google Earth. So I

18   also addressed a variety of financial

19   information from Google and metric information

20   about the use of the product.

21   Q.   What did you do to evaluate these

22   factors?

23   A.   Well, I considered a lot of

24   material, material relating to the usage of

1302

1   products. And not only just Google Earth, but I

2   also considered information about Maps and other

3   Geo products. And this slide in particular I

4   think is a very informative one from back in

5   this 2005-2006 time period.

6   One of the things that -- as

7   you've heard, Google had a free version, but

8   also had some versions that were charged to

9   customers. And one was the Google -- so Google

10   Free is the free version. Then there was Google

11   Plus which was a $20 option for customers. And

12   then there is also Google Pro, it was more

13   expensive it had more functionality and there is

14   also Enterprise.

15   What I'm showing on this slide are

16   two things, one in blue, and this by the way,

17   the source of information I used for these are

18   PTX 115 and PTX 274. And the blue information

19   shows the total number of activations in 2005

20   beginning in June, and 2006, and that's mostly

21   the free version.

22   And Google had hoped in this early

23   time period that the -- providing Google Free

24   would help increase interest so that more

1303

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 1        consumers would be interested in purchasing or

 2        licensing the Google Plus and the Google Pro

 3        versions.  And clearly activations reflect

 4        popularity.  It's a great product.

 5                      Google Earth was activated by a

 6        lot of people.  And this is worldwide.  But

 7        often they would just look at it for looking at

 8        their home, run time, they wouldn't necessarily

 9        lead to continued its usage.  As you can see

10        here for 2006, in spite of this very large

11        number of activations worldwide, there were only

12        235,000 customers that chose to license it in

13        the Plus version for $20 a year.

14                      And Pro was just started to grow.

15        But this time there were only 22,000 Pro

16        subscribers, so very few people actually paid

17        for the product even though it was very popular

18        for looking at and exploring once or perhaps

19        more.

20             Q.   Mr. Reed, approximately what

21        percentage of the total activations and

22        subscribers were of the Google Free version?

23             A.   Well, I'm not sure I would call

24        them subscribers, these are people who
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1304

1   downloaded Google Free and maybe certainly they

2   might have looked at it at least once. So I

3   wouldn't call them subscribers. But in terms of

4   the number of people that downloaded and what

5   portion of them scribed, it's less than one

6   percent. It's less than.1 percent. It's a very

7   small number.

8   Q. Were there a special category of

9   customers that you identified that subscribed to

10   the Enterprise product?

11   A. Yes. In addition to Plus and Pro,

12   there is also Google Earth Enterprise. But that

13   was largely a federal associated -- federal

14   government associated product. Much of the

15   customers for Google Earth Enterprise were

16   federal government, or federal government

17   agencies.

18   Q. Mr. Reed, you referred to Google

19   Plus. What happened to Google Plus?

20   A.   Google Plus, Google kept trying to

21   promote it, but by around 2008, the numbers were

22   actually declining and Google ended up doing

23   away with Google Plus. So they kept Google Pro

24   for some time until the last couple of years in

1305

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 1        which Google Pro was also terminated.  But Plus

 2        was terminated around 2008.  It just wasn't

 3        successful enough.

 4               Q.   In doing your analysis, what did

 5        you discover regarding the ad revenue for Google

 6        Earth and Google Maps?

 7               A.   I also explored the relationship

 8        between Google Earth and Google Pro, and one of

 9        the things I considered was ad revenue.  Mr.

10        Birch testified about ad revenue.  This chart

11        shows from the earliest period that was

12        available the amount of ad revenue for the

13        Google Maps desktop and this is for the US, and

14        even also compared to Google Earth.  And you can

15        see that Google Earth ad revenue is relatively

16        low.  There was not much success for the reasons

17        Mr. Birch addressed, not much interest in ads

18        through the Google Earth platform because people

19        who are looking at Google Earth weren't

20        necessarily interested in buying things.  They

21        were just exploring and browsing, whereas Maps

22        on the other hand had significant growth and

23        continued to have significant growth in terms of

24        ad revenue.
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1306

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 1              And this also reflects that Google

 2     Earth represented in terms of these ads, the ad

 3     revenue in the US, represented less than two

 4     percent of the combined Maps and Earth.

 5              Q.   For this comparison of Google

 6     Earth ad revenue to Google Maps ad revenue, what

 7     documents did you rely on?

 8              A.   I considered DTX 1061 and DTX

 9     1062, which was financial information from

10     Google that Mr. Birch addressed that reflects

11     this.

12              Q.   What does this fact demonstrate or

13     this distinction between Google Earth ad revenue

14     and Google Maps revenue, how is that significant

15     to your analysis?

16              A.   It has several significance.  One

17     is the relationship between Maps within the Geo

18     group, Maps is a small part -- I'm sorry, Google

19     Earth is a relatively small part of the Geo

20     group.  And certainly you can see that compared

21     to the Maps.  Maps is a significant driver of

22     the Geo group.

23              The other important thing here is

24     there is no reason to believe that somehow Earth
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1   was driving results for Maps. You can see that

2   the ad revenue for Earth was really, really

3   small. Ad revenue for Maps was strong and

4   growing dramatically, and there is no reason to

5   believe that somehow Google Earth would help ad

6   revenue for Maps.

7   Q.   What is the next Georgia-Pacific

8   factor you considered?

9   A.   The next factor relates to

10   something that we damages experts call conoid

11   aspects. It goes to the relationship between

12   one product that might be associated with

13   suggestions about patent use and other products

14   that might have some relationship.

15   So one of the things I did was

16   study the documents and the testimony and in my

17   conversations with Google employees address the

18   question of are there other products that might

19   benefit from Google Earth.

20   Q.   What did you do to evaluate this

21   factor?

22   A.   I evaluated a lot of materials I

23   just mentioned, but ultimately the documents and

24   my discussion with individuals at Google like

1308

1   Mr. Rokach and Mr. Birch identified that there

2   is really is one principal area where there is a

3   relationship, and that relates to Google Chrome

4   and Google Toolbar.

5   Q.   What did you find was the

6   relationship between Google Earth and Google

7   Chrome and Google Toolbar?

8   A.   Again, the jury has heard about

9   this from Mr. Birch. When a consumer would

10   download Google Earth for free, they would have

11   an option if they chose to also download Google

12   Toolbar, which is a little search bar that can

13   appear on a browser, or Google Chrome which is

14   another search product kind of like Internet

15   Explorer for Microsoft.

16   If a customer downloaded Google

17   Earth and chose to get Chrome, for example, what

18   that meant is it was less likely that Google

19   would have to pay Adobe for what's called this

20   referral fee that you heard about, because the

21   customer already had Chrome and they wanted to

22   download something from Adobe like Acrobat, they

23   wouldn't have a download of Chrome as well.

24   Adobe won't have another installation of Chrome,

1   it won't pay additional referral fees. This

2   gives rise to Google and I considered that cost

3   savings and including it as a revenue in my

4   calculation of royalty here.

5   Q.   As part of your analysis,

6   Mr. Reed, did you review the Adobe agreement?

7   A.   Yes. And you can tell this is a

8   confidential document. This is an agreement

9   between Google and Adobe relating to this

10   agreement that they have that if a customer goes

11   and downloads an Adobe product like Acrobat or

12   other Adobe products, they can also choose to

13   download Chrome or Toolbar and if that happened,

14   Adobe can say I had ten downloads of Chrome, you

15   should say pay a fee for those ten and Google

16   would pay Adobe. This is what I used for

17   addressing the cost savings.

18   Q.   What is the exhibit number of the

19   Adobe agreement?

20   A.   I'm not sure if it is cut off, all

21   I can see is PTX 21.

22   Q.   For purposes of the record it's

23   PTX 213.

24   A.   Thank you.

1310

1   Q.   Mr. Reed, based on your analysis,

2   did you conclude that Google Earth promotes any

3   other Google product?

4   A.   No.   And this is consistent with

5   Mr. Birch's testimony and what I heard from

6   other employees like Mr. Bailey and Mr. Rokach

7   of Google.   There is a relationship with Toolbar

8   and Chrome associated with this cost savings,

9   but that is it, otherwise it's really Maps that

10   drives Geo.

11   Q.   After your review of the

12   Georgia-Pacific factors, what was the next step

13   in your analysis?

14   A.   The next step is to consider these

15   factors and this input and determine a

16   reasonable royalty.   And that gives rise to a

17   consideration of revenue and apportionment of

18   revenue and royalty rate and then ultimately

19   determining what that was.

20   Q.   What was the next step in your

21   analysis?

22   A.   I went back to consider the

23   January 2006 ACI proposal where it was

24   suggesting revenue, it was suggesting a royalty

1   rate for a nonexclusive license in the range of

2   one to three percent and patent related revenue,

3   and then ultimately in the right side here, it

4   shows my consideration, the revenue includes the

5   Earth and Globe revenue, this cost savings for

6   the Toolbar and Chrome that we just talked

7   about, and ultimately my determination of 50

8   percent apportionment of the revenue is

9   appropriate and a two percent royalty rate is

10   appropriate, along with the revenue information

11   that flows into my conclusion that the lump sum

12   for the paid up license would be $3 million.

13   Q.   Mr. Reed, you already showed the

14   jury the statute that relates to damages. Were

15   there any other legal principles that were

16   important to your analysis?

17   A.   Absolutely. There is another one

18   relating to the federal government, and this

19   relates to 28 USC 1498 which is basically saying

20   that if the federal government uses or purchases

21   or manufactures something related to a patented

22   technology, that the patent owner would have to

23   go to federal claims court in Washington DC and

24   get consideration for it, for damages from the

1312

1   federal government. So it's important for my

2   analysis here to remove the federal government

3   revenues from the consideration for the royalty

4   applicable in this case.

5   Q.   What was the next step that you

6   took to determine the reasonable royalty?

7   A.   Well, the next step is to

8   determine that the amount of revenue that would

9   be applicable or in this slide the green box,

10   the total royalty base.

11   Q.   And what did you identify a

12   particular time period to consider?

13   A.   Yes. Again, this would be the

14   damages accounting period I described earlier,

15   so a period beginning July of 2010, and then

16   continuing through April 2016.

17   Q.   And how does that compare to the

18   hypothetical negotiation date?

19   A.   Well, the hypothetical negotiation

20   date is back in 2005, and that's what the

21   determination would be made. This is one of the

22   complications about this hypothetical, the

23   period for damages is different, but the

24   hypothetical negotiation is back in mid 2005 and

1313

1   the damage period that ACI is addressing begins

2   in July of 2010 through April of 2016.

3   Q.   What were the revenue sources for

4   Google Earth that you considered?

5   A.   I considered a variety of sources.

6   And the first is the licensed revenue. Google

7   Plus, Google Earth Plus was gone by this point

8   in time. But Google Pro remained a product to

9   earn licensed revenue. I took all the US

10   revenue relating to Google Pro. I considered

11   the Google Earth Enterprise license revenue, but

12   then I subtracted the federal government.

13   That's the first bullet.

14   The second bullet is popped up so

15   I can continue to address that.

16   Q.   Please continue, Mr. Reed.

17   A.   The second element is the ad

18   revenue. And I have already shown the ad

19   revenue in the line chart relating to US ad

20   revenue for Google Earth and these are the ads

21   that would be available when someone was looking

22   at Google Earth. Again, there wasn't much

23   revenue there, but I considered all the US

24   revenue in that regard.

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 1                  The next bullet addresses what

 2      happened with Globe, or when Google Maps added

 3      Google Earth in May of 2013.  At that point I

 4      believe it was appropriate to include some

 5      consideration for ad revenue in Maps because

 6      Earth was added even though I didn't see any

 7      evidence that use of Maps changed when that

 8      happened.

 9                  Nevertheless I took five percent

10      of the Maps revenue from the US to ads and I

11      allocated that to Earth and included that in the

12      revenues for my analysis.

13            Q.    Were there any other sources of

14      revenue that you included?

15            A.    Yes.  The next one is not revenue

16      as I mentioned, it's cost savings relating to

17      Chrome and Toolbar.  But I considered all that

18      cost savings as revenue and I included the US

19      portion in its totality for this relevant time

20      period.

21            Q.    And can you -- were there any

22      other revenue sources you considered?

23            A.    One additional one, and that

24      relates to Audi.  I'm not sure that much has
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1315

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 1        been discussed with respect to Audi, but Google

 2        Earth was provided for Audi for its own

 3        implementation as Mr. Birch addressed, I

 4        believe, and Google earned revenue from Audi.  A

 5        portion of that would be associated with Google

 6        Earth, and other portions to other things that

 7        are not at issue in this case.

 8                   And also I had to determine a US

 9        portion because Audi sells vehicles all over the

10        world, of course, and only the US vehicles would

11        be applicable, so I did that allocation.

12             Q.   Mr. Reed, can you show the jury

13        your calculation of the applicable Google Earth

14        revenues?

15             A.   Yes.  This is going to summarize

16        it for the benefit of all of us.  I'm not going

17        to show annual amounts, just the total.  The

18        first is US Earth licensing revenue and that

19        totaled $160.8 million.  And the documents I

20        used in assessing this issue are DTX 114 and DTX

21        1060.

22             Q.   What was the next step in your

23        analysis?

24             A.   I needed to subtract out the
```

1   federal bookings. This is the federal use of

2   Pro Enterprise I mentioned a moment ago. So I

3   subtracted $48.5 million. And the document I

4   relied on for this analysis, this actually was a

5   big spreadsheet, DTX 1119.

6   Q.   What did you do with those two

7   numbers?

8   A.   Subtract the federal bookings from

9   a license revenue so that's the total U.S.

10   license revenue was 112.3 million.

11   Q.   Mr. Reed, is your calculation of

12   the revenue associated with the Google Earth

13   products consistent with the numbers Mr. Birch

14   showed the jury?

15   A.   I believe so, yes. They are

16   different time periods, because this one's

17   addressing the period beginning mid 2010, but

18   yes, they are consistent.

19   Q.   Now, that relates to licensing

20   revenue. What else did you conclude?

21   A.   I want to add one thing, if I

22   could, about the previous, and that's just that

23   you can see the federal bookings are a very

24   large portion of the license revenue, so that's

1   an important consideration in my analysis.

2   Q.   What was the next factor that you

3   considered?

4   A.   The next factor is the ad revenue

5   we addressed with respect to Google Earth and as

6   you can see, the U.S. Revenue associated with

7   these ads was $4.3 million. So there was not a

8   lot of ad revenue associated with Google Earth

9   in the U.S.

10   Q.   And how did you use that amount in

11   your calculation?

12   A.   I included all of that as the

13   starting point for this consideration of the

14   revenue for the time period applicable here.

15   Q.   And again, were your numbers

16   consistent with those identified by Mr. Birch?

17   A.   Yes. Again, different time

18   periods, but they were consistent.

19   Q.   What other sources of revenue did

20   you include?

21   A.   Next is addressing the Google Maps

22   for this period starting in, in May of 2013,

23   when Globe was released. And so I considered

24   first the Maps ad revenue and this is a limited

1318

1   time period, but it was 89.9 million. And in

2   the next step is the allocation of 5 percent

3   that I mentioned a moment ago. The number that

4   I allocated was 7.55 million. If you look at

5   those two, it doesn't look like 5 percent,

6   that's because I added an additional period up

7   through partial 2016. So it represents five

8   percent of the Maps ad revenue. And I should

9   add that the ad revenue sources are DTX-1011,

10   DTX-1113, DTX-1061, DTX-1132. And then for

11   purposes of evaluating the 5 percent

12   relationship, which I believe is very favorable,

13   because ad revenue as I mentioned earlier was

14   less than two percent when you compared Earth to

15   Earth and Maps, those were from DTX-1061 and

16   DTX-1062.

17   Q.   And what was the next category of

18   revenue that you included in your royalty base?

19   A.   It relates to the Chrome and

20   Toolbar cost savings. And this calculation

21   looked at the number of installations of Chrome

22   and Toolbar that came about from the Google

23   Earth free downloads, allocated that to the

24   U.S., apply approximately a $3.18 per download

1319

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 1       cost savings and that gave rise to 81.3 million

 2       in cost savings, which I treated as revenue.

 3       And the source for that analysis was DTX-1141,

 4       DTX-0214 and DTX-1139.

 5                Q.   Did you include any other

 6       categories in your calculation, Mr. Reed?

 7                A.   Yes, the consideration for Audi I

 8       mentioned a moment ago.  So I considered the

 9       Audi payments to Google, the allocation for

10       Google Earth and then the consideration for just

11       the U.S. Audi vehicles.  And the result was that

12       allocation of 2.9 million.  And the source for

13       that analysis was PTX-0342, DTX-1144 and

14       DTX-1145 and those included information from

15       Audi showing its distribution of vehicles coming

16       from public statements by Audi.

17                Q.   Mr. Reed, what was the total

18       amount of revenue that you included in your

19       royalty base?

20                A.   It's $208.3 million.

21                Q.   And to be clear, is this revenue

22       or profit?

23                A.   This is revenue.  This does not

24       reflect all the costs that go into providing
```

1   Google Earth. I should say it doesn't reflect

2   any of the costs that relate to Google Earth,

3   and they are quite substantial.

4   Q.   Now that after you calculated the

5   Google Earth revenue, what was the next step in

6   your analysis?

7   A.   Well, the next step is the

8   apportionment issue, what I call the

9   patent-related revenue. And then also the

10   proper royalty rate.

11   Q.   And how did you conduct your

12   apportionment.

13   A.   With respect to the apportionment,

14   I consider the input from Doctor Goodchild

15   relating to in his report and in my conversation

16   with him, he provided me input as to his view of

17   the contribution of Google Earth, all the

18   different aspects of Google attributing to

19   Google Earth compared to the patent technology.

20   Q.   Mr. Reed, can I get you a bottle

21   of water?

22   A.   I actually have one. Thank you.

23   Q.   Oh, okay.

24   A.   But perhaps I should take a sip.

1321

1   So I considered the Doctor Goodchild's input

2   about the contributions of Google to Google

3   Earth. And in his view less than approximately

4   15 percent of all the functionality and features

5   of Google Earth could be associated with this

6   patent technology to the extent it applies at

7   all.

8   Q.   And what did you do next in your

9   analysis?

10   A.   The next step is to go to the

11   apportionment. I consider that, as did Doctor

12   Goodchild, approximately 15 percent. But I also

13   considered that ACI would want to keep as much

14   of that revenue in the royalty base as possible.

15   So I ultimately evaluated those two positions

16   and determined that 50 percent would be a proper

17   apportionment.

18   Q.   What was the next step in your

19   analysis, Mr. Reed?

20   A.   The next step is the royalty rate.

21   Q.   And how did you determine the

22   appropriate royalty rate?

23   A.   So, I considered back to this

24   January 2006 suggestion by ACI that the royalty

1322

1   rate for a non-exclusive license could be in the

2   range of 1 to 3 percent. And I determined that

3   consideration of all the Georgia Pacific factor

4   analyses, the input from the parties, the

5   evaluation of these offers, that a 50 percent

6   apportionment and a two percent royalty rate

7   reflects an appropriate compromise between the

8   parties at the time of this hypothetical

9   negotiation in 2005.

10   Q.   And what was the next step on your

11   analysis?

12   A.   The next step is to put it all

13   together for the calculation, but there may be a

14   slide that shows the results from Doctor

15   Goodchild. But I already addressed this, Doctor

16   Goodchild's input of the 15 percent and then my

17   consideration of the compromise. And then the

18   next slide shows the results. Two percent

19   royalty rate, 50 percent apportionment.

20   Q.   How did you use these numbers in

21   your calculation of an appropriate amount?

22   A.   To go back to the 208 million in

23   revenue and apply these factors to determine the

24   royalty flow and then essentially convert that

```
 1        into a lump sum amount.  So the top part here

 2        shows the total revenue that I already

 3        addressed, 208 million.  Then I applied the 50

 4        percent apportionment, applied two percent

 5        royalty rate for this non-exclusive license, and

 6        then I considered discounting the present value,

 7        just a financial technique to determine an

 8        amount as of mid 2010 that would be a lump sum

 9        amount.  The results were 1.8 million under one

10        consideration and then I also considered another

11        one favorable for ACI that would include 600,000

12        in royalty every year rather than the actual

13        declining amount that resulted from an actual

14        revenue for Google Earth.  And if I used that

15        higher figure, I obtained a result of $2.5

16        million.  Ultimately I concluded that the

17        maximum amount that would be appropriate for a

18        reasonable royalty would be $3 million.

19                 Q.   And how did these amounts relate

20        to your opinion regarding the result of a

21        hypothetical negotiation in 2005?

22                 A.   This 2005 hypothetical would have

23        a reasonable royalty agreed upon by the parties

24        that would be a lump sum paid up amount that
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1324

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 1        would be at most $3 million.

 2                Q.   And can you summarize for the jury

 3        the important considerations that you relied on

 4        in coming to that conclusion?

 5                A.   Yes, I considered, one, check

 6        against the Stanford agreement, three million's

 7        substantially larger than the 600,000, and

 8        that's consistent for the considerations in my

 9        analysis.  I also considered the positions of

10        Google and ACI that I've addressed, that Google

11        had difficulties monetizing Earth.  You saw the

12        different revenue figures and the fact that

13        Google Earth plus was discontinued.  I

14        considered Google's contributions to Google

15        Earth, the 1 million maximum offer to purchase

16        the patent.  And I also, from the standpoint of

17        ACI, considered that they were not able to enter

18        into licenses, there were no competitive

19        products, there was a compromise to sell the

20        patent for three to five million euros and that

21        the suggestion in January 2006 was a 1 to 3

22        percent rate of patent related revenue for a

23        non-exclusive license.

24                Q.   Mr. Reed, for a hypothetical
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1   negotiation occurring in 2005, what did you

2   believe was the most important factor?

3   A.   Well, I think all these factors

4   are important, but certainly one of the

5   important factors is the considerations by the

6   parties in this 2006 time period with a one to

7   three percent suggested royalty rate applied to

8   patent related revenue and the suggestions of

9   lump sums to sell the patent in the ranges

10   addressed here of 1 million dollars and three to

11   five million euros.

12   MR. SNYDER: Thank you, Mr. Reed.

13   Pass the witness.

14   MR. HAWES: Your Honor, do you

15   want me to get started or would you like to do

16   lunch?

17   THE COURT: I think it would be

18   good to start it unless that's a problem for

19   you.

20   MR. HAWES: It's not a problem,

21   Your Honor, but I wanted to --

22   THE COURT: Why don't we go maybe

23   another half an hour and then we'll take our

24   lunch break.

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 1                    MR. HAWES:  Okay, Your Honor.

 2    BY MR. HAWES:

 3              Q.   Good afternoon, Mr. Reed.

 4              A.   Good afternoon.

 5              Q.   Now, you would agree with me,

 6       wouldn't you, that you are not a technical

 7       expert?

 8              A.   That's correct, yes.

 9              Q.   So when it comes to analysis of

10       whether a license agreement is technically

11       comparable, that's not in your expertise?

12              A.   That's correct.  I would rely on a

13       technical expert like Doctor Goodchild.

14              Q.   And you would also agree that with

15       regard to apportionment of the various technical

16       contributions of Google Earth, that's not your

17       expertise either?

18              A.   Correct.  To some extent I would

19       have expertise in that area based upon the

20       review of financial and marketing and other

21       types of materials, but principally that would

22       be a technical issue I'd rely on a technical

23       expert like Doctor Goodchild as I did here.

24              Q.   And you were here for Doctor
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1   Goodchild's testimony, weren't you?

2   A.   I was here for his testimony

3   today.

4   Q.   Were you hear for his testimony

5   yesterday?

6   A.   I was not, no.

7   Q.   For the testimony that you saw,

8   did you hear Doctor Goodchild give any testimony

9   to this jury regarding whether the Stanford

10   agreement was comparable?

11   A.   My understanding is that he did

12   not address that them. And I was relying on his

13   report and my conversations with him.

14   Q.   In terms of the evidence that's

15   been offered to the jury, he did not testify on

16   that issue, did he?

17   A.   He did not testify on that to the

18   jury, that's my understanding.

19   Q.   And you don't have the expertise

20   to testify on that issue, correct?

21   A.   No, that's why I relied on Doctor

22   Goodchild.

23   Q.   Who didn't testify to the jury,

24   correct?

1328

1   A.   My understanding is he did not

2   testify to the jury, that's correct.

3   Q.   And were you hear for Doctor

4   Castleman's testimony?

5   A.   No, I was not.

6   Q.   I'll represent to you that Doctor

7   Castleman testified that the Stanford technology

8   was not technically comparable?

9   A.   That would be consistent with his

10   report, which I reviewed and considered and I

11   also considered Doctor Goodchild's response to

12   that.

13   Q.   So with respect to our jury, would

14   it be fair to say that they have only received

15   testimony from one technical expert and that

16   technical expert determined that the Stanford

17   agreement was not technically comparable to the

18   '550 Patent?

19   A.   In terms of what was presented to

20   the jury, not considering my relying of the

21   information from Doctor Goodchild in his report

22   to me, but if you just consider the oral

23   testimony, that's my understanding.

24   Q.   And again, you're not a technical

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 1        expert?

 2                  A.   Correct, I'm not.

 3                  Q.   And with respect to your

 4        discussion of apportionment, you talked about

 5        what Doctor Goodchild told you, correct?

 6                  A.   That's correct.

 7                  Q.   And during his testimony, did he

 8        offer any of that information to the jury?

 9                  A.   My understanding is that he did

10        not address that.

11                  Q.   Okay.

12                  A.   At least not directly on that

13        particular point about the 15 percent.

14                  Q.   And I understand that evidently

15        you weren't here for Doctor Castleman, correct?

16                  A.   That's correct.

17                  Q.   So to the extent Doctor Castleman

18        testified to the jury about the appropriate

19        technical contributions to Google Earth, that

20        would not have been countered in any way by

21        Doctor Goodchild, correct?

22                  A.   I wouldn't agree with that.  I

23        think my understanding of Doctor Goodchild's

24        analysis is that he did addressed the technical
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 1        aspects of the technology.

 2               Q.    You on your slide had a 15 percent

 3        number up there, correct?

 4               A.    Correct, yes.

 5               Q.    And did Doctor Goodchild present

 6        that to the jury?

 7               A.    My understanding is he did not,

 8        but he did present it to me in his expert

 9        report.

10               Q.    And is that expert report in

11        evidence?

12               A.    My understanding is that expert

13        reports are typically not in evidence.

14               Q.    Do you have any understanding of

15        it being in evidence in this case?

16               A.    I don't have that understanding,

17        no.

18               Q.    Now, your task was to determine a

19        reasonable royalty, correct?

20               A.    Well, I think it's broader than

21        that, to determine damages, but all the evidence

22        here points to a reasonable royalty and that's

23        what I sought out to analyze.

24               Q.    And you would agree that the basic
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1331

1   rule for determining a reasonable royalty is

2   that in no event less than a reasonable royalty

3   for the use made of the invention by the

4   infringer, correct?

5   A.   Correct, that's the statute

6   language.

7   Q.   And the infringer here is Google?

8   A.   The alleged infringer here is

9   Google.

10   Q.   But in terms of this statutory

11   language when the word infringer is used, you

12   were thinking of Google making the assumption

13   that you did, that there was infringement?

14   A.   Making an assumption that the

15   patent is valid and infringed and in that

16   instance the party that would be paying the

17   royalty would be the willing licensee here,

18   which is Google.

19   Q.   And you testified that the

20   reasonable royalty would be lump sum and paid

21   up, correct?

22   A.   Absolutely.

23   Q.   And paid up, by paid up you mean

24   whatever happens afterwards, doesn't matter,

1   you've already paid and that's it?

2   A.   That is the structure of a lump

3   sum payment license, you make a payment up front

4   and then there would be no ongoing payment, that

5   the license is covered for the length of the

6   patent.

7   Q.   So to put it in terms for those of

8   us who are not financial document experts, it's

9   kind of like a pizza buffet where you pay one

10   amount, no matter how much pizza you eat, it's

11   still that one amount?

12   A.   Yes, but the consideration that

13   goes into the determination of a lump sum amount

14   is a consideration in my analysis here of the

15   actual revenues and the actual cost savings.

16   Q.   I'm just asking you what lump sum

17   means, Mr. Reed. Does lump sum mean that like

18   in the pizza buffet I pay one amount and I get

19   to, for the pizza buffets, eat as much pizza as

20   I want or in terms of the patent, use the patent

21   as much as I want?

22   A.   Yes, but a restaurant has a good

23   idea about how much people eat on average.

24   Q.   And is that not true with respect

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 1        to patents?

 2                A.   Is what not true?

 3                Q.   That there's a good idea of how

 4        much use people make?

 5                A.   When assessing in a patent damages

 6        case like this, yes, we're able to assess the

 7        extent of revenues that are earned and some of

 8        these financial aspects by virtue of this

 9        Georgia Pacific analysis.

10                Q.   So I'm asking specifically about

11        that language from the statutes, use of the

12        invention.  Did you see documents specifically

13        relating to PTX-55, the spread sheet showing the

14        number of sessions that were used of Google

15        Earth?

16                A.   Yes, I considered information

17        relating to sessions and activations that's part

18        of the metrics that I considered.

19                Q.   Did you hear Mr. Birch testify

20        that a session is when a customer opened and

21        begins using Google Earth?

22                A.   Yes.  So it could happen several

23        times for a consumer on a day that they're going

24        back and looking at Google Earth a couple times
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1334

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 1     that day.
 2              Q.   And the paid up license that
 3     you're suggesting would have occurred, that
 4     would have occurred in July of 2005?
 5              A.   Well, the, it's a little
 6     complicated because of this hypothetical nature.
 7     The hypothetical negotiation would take place in
 8     mid 2005, but it represents a payment for a
 9     period that begins in July of 2010.
10              Q.   All right, but you said the
11     hypothetical negotiation would result in a paid
12     up license, right?
13              A.   Absolutely, that's correct.  Back
14     in mid 2005.
15              Q.   And so that license, that payment
16     would occur back in 2005, right?
17              A.   Well, it would in a normal
18     circumstance, but in this case we've had -- also
19     have to consider the relevant accounting time
20     period for damages.
21              Q.   Let me try again.  Mr. Reed, when
22     would your $3 million payment occur?
23              A.   Based on the way I did the
24     discounting it would have occurred in mid 2010.
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1335

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 1        Alternatively I could have discounted that back

 2        to 2005, that would be a smaller number, would

 3        be less than $3 million, but for simplicity, as

 4        of mid 2010 when damages period begins.

 5                  Q.   So the payment that you have told

 6        this jury would have been a reasonable royalty

 7        would have been a payment made in mid 2010?

 8                  A.   The amount -- the payment would

 9        have been at the beginning back in mid 2005, but

10        for purposes of accounting and things that this

11        Court may deal with later on like pre-judgement

12        interest, it should be viewed as a payment as of

13        the time in mid 2010.  That's the date of the

14        discounting of this amount.

15                  Q.   So this is a paid up lump sum

16        payment, right?

17                  A.   That's right.

18                  Q.   It's one payment, right?

19                  A.   That's correct.

20                  Q.   What is the date of that payment?

21                  A.   In the hypothetical world, that

22        payment would have been in mid 2005 for purposes

23        of the complications of damages analysis, there

24        are other considerations.
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1336

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 1              Q.   So is it not one payment?

 2              A.   No, it is one payment, I just this

 3      had to prorate the payment for the period that

 4      would begin for the relevant time period of

 5      damages here.

 6              Q.   Let's try both of your days, then,

 7      starting in June/July of 2005, would the parties

 8      have known how much use Google Earth would have

 9      made of the patented method?

10              A.   There could be evaluations of

11      that, but for purposes of assessing damages

12      under the Georgia-Pacific factors, I and other

13      damages experts are allowed to consider the

14      actual events that occurred.  So I was able to

15      evaluate the actual revenues, the actual cost

16      savings from Chrome and Toolbar and those were

17      evaluated by me in this hypothetical setting.

18              Q.   Mr. Reed, I didn't ask you what

19      you did.  Would the parties in 2005 had known

20      how many sessions there were going to be?

21              A.   In a real setting, you would not

22      know that.  This is a hypothetical, and

23      hypothetically we're allowed to assess what

24      actually happens.
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1337

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 1                 Q.   And your testimony is that they

 2      would have agreed to a lump sum in 2005?

 3                 A.   Correct.  All the evidence points

 4      to lump sum.

 5                 Q.   If the jury decides that Google

 6      and ACI would instead have agreed to a use based

 7      license, you did not testify as to what type of

 8      royalty would be appropriate; correct?

 9                 A.   Correct.  In my opinion the

10      appropriate royalty is a lump sum amount and I

11      addressed that and I also showed revenue

12      amounts.

13                 Q.   But if the jury disagrees with

14      you, it's a possibility, if the jury disagrees

15      with you, you did not offer any opinion as to

16      what a proper royalty rate would be for a use

17      based license?

18                 A.   Well, I disagree with that.  If

19      the jury viewed revenue as being an appropriate

20      use base figure over time, I opined about a two

21      percent royalty.  So the jury could look at the

22      revenue every year, apply whatever apportionment

23      that you believe would be appropriate, apply the

24      two percent royalty rate and that could give
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1338

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 1        rise to a running amount every year.  But all

 2        the evidence points to a lump sum structure as

 3        being appropriate.

 4              Q.   We heard you say you prefer the

 5        lump sum.  I certainly understand that.  With

 6        respect to a session based royalty, you have not

 7        given the jury any opinion as to what the

 8        appropriate royalty would be on a per session

 9        basis for Google Earth?

10              A.   That's correct, I don't believe

11        that's appropriate.

12              Q.   Let's take a look at your chart of

13        revenue.  Now, Mr. Reed, did ACI make the

14        decision that Google Earth should be offered for

15        free?

16              A.   No, but from my analysis of the

17        documents, ACI was aware back in that early time

18        period that Google Earth was being offered for

19        free.

20              Q.   I'm asking did ACI make the

21        decision for Google Earth to be offered for

22        free?

23              A.   No, ACI did not make that

24        decision.
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1339

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 1              Q.   Google made the decision for

 2    Google Earth to be offered for free; correct?

 3              A.   Correct.  That's correct, Google

 4    did.

 5              Q.   Looking at your categories of

 6    revenue, your first category of revenue is for

 7    US Earth licensing revenue.  Do you see that?

 8              A.   Yes, I do.

 9              Q.   That doesn't apply to the version

10    of Google Earth that Google chose to offer for

11    free; right?

12              A.   Well, it would apply to it, but it

13    doesn't generate revenue, but it certainly

14    applies to it because Google Free, Google Earth

15    Free was offered in an attempt to try to promote

16    the Google Earth Pro and Google Earth Plus and

17    that would generate revenue.

18              Q.   Your testimony to the jury is that

19    by offering one product for free, Google was

20    attempting to make the jury buy a similar -- pay

21    money for a similar product; is that correct?

22              A.   You said make the jury buy.

23              Q.   Good correction, Mr. Reed.  So

24    you're saying that Google's plan was they would
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1   offer a product that someone would have to pay

2   money for, and to make people more likely to pay

3   money, they would offer a similar product for

4   free; is that correct?

5   A.   That was part of the original

6   consideration, that people trying it would see

7   how wonderful it was, maybe it would give rise

8   to them wanting to pay the $20 annual fee.

9   Q.   Do you think that it's possible

10   that having the option to use it for free,

11   people would choose not to pay the $20 annual

12   fee?

13   A.   Given the limited use by most

14   individuals of the product, that's what

15   happened. I look at it to look at my home, then

16   I don't have further interest in it. So I

17   wouldn't pay the $20 fee in that circumstance.

18   Q.   Even if I wanted to use it many

19   times, Mr. Reed, why would I pay the $20 fee if

20   I could use it for free?

21   A.   Because the additional

22   functionality that's available with the other

23   products.

24   Q.   Do we have any evidence in this

1341

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 1        case of that additional functionality?

 2                A.   I'm not sure if there was

 3        discussion about the additional functionality,

 4        but I know there was additional functionality in

 5        the Plus and the Pro and the Enterprise

 6        versions.

 7                Q.   Let's assume I am choosing to use

 8        the free version.  Are you with me so far?

 9                A.   I am with you.

10                Q.   If I use the free version, there

11        is not going to be any revenue in this first

12        group of revenue that applies to my using the

13        free version; correct?

14                A.   You asked me about this in my

15        deposition and I think we went on for some time

16        discussing it.  As I explained that there is a

17        relationship because these promotional aspects.

18        If I use the free version, it may give rise to

19        me purchasing the Pro version or selecting ads.

20        And if I select ads or if I later use the Pro

21        version, that will generate revenue.

22                Q.   I'm pointing to the first

23        category, Mr. Reed.  That's the licensing

24        revenue; correct?
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1342

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 1              A.   Correct.  I addressed that --

 2              Q.   I'll get to the other categories.

 3              A.   But I also said it could give rise

 4     to me doing licensing Pro and that would be

 5     licensing revenue.

 6              Q.   Let me give you the scenario again

 7     and let's be clear about this, I am choosing to

 8     use Google Earth Free and I'm not choosing at

 9     any point to pay money for something that I can

10     do free.  Would there be any revenue in your

11     first category?

12              A.   Not under your assumptions.

13              Q.   If I use Google Earth Free and

14     decide not to click on any ads or I use it today

15     when there aren't any ads, under either of these

16     scenarios there would be no revenue in the

17     second category?

18              A.   In the second category, you mean

19     US Google Earth ad revenue?

20              Q.   I'm only using Google Earth and

21     I'm not clicking on any ads.

22              A.   And you're not talking about Maps?

23              Q.   I'm not talking about Maps, I'm

24     talking about Google Earth.
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1   A. Yes, if the customer never clicked

2 on an ad, it wouldn't generate revenue and

3 Google wouldn't get revenue.

4   Q. And when I installed Google Earth

5 I didn't download Toolbar or Chrome, there would

6 be no revenue in that third category; correct?

7   A. If I chose not to download Toolbar

8 or Chrome, that would be correct, there wouldn't

9 be cost savings.

10   Q. And given that I'm using Google

11 Earth Free, I'm clearly not in my Audi, so there

12 is no revenue in that category?

13   A. That's correct.

14   Q. I would be using Google Earth Free

15 and there would be no revenue in any of these

16 categories under the circumstances that I have

17 laid out?

18   A. Under the circumstances that you

19 have laid out, that's correct.

20   Q. And you understand that the

21 statute requires a reasonable royalty for the

22 use made of the invention; correct?

23   A. Yes, but it doesn't specify that

24 you have to charge per activation or per

1344

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 1          session, it just says there has to be a

 2          reasonable royalty for the consideration under

 3          the Georgia-Pacific analysis.

 4                    Q.   So were you here when Mr. Jones

 5          testified?

 6                    A.   I was, yes.

 7                    Q.   Did you hear Mr. Jones testify

 8          that he told Art+Com from the start that Google

 9          wasn't using the '550 patent?

10                    A.   Yes, and you said.  It's still his

11          view and his opinion.

12                    Q.   But in terms of what happened in

13          2006, you understood his testimony that he --

14          from the very first communication, he told them

15          that Google wasn't using the patent?

16                    A.   I'm not sure you're representing

17          that correctly because my understanding is the

18          January 2006 document that I'm evaluating was

19          provided to Mr. Jones before any further

20          conversations, so ACI was already providing

21          information about the one to three percent rate.

22                    Q.   Let me be clear.  Mr. Jones' first

23          communication, Mr. Jones from the first in terms

24          of his communications, he told Art+Com that
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1345

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 1       Google was not using the patents?

 2               A.   I would point the jury to

 3       Mr. Jones' testimony about whether it was his

 4       very first or something he did in those early

 5       conversations.  I don't know if it was his very

 6       first statement or conversation.

 7               Q.   You looked at a number of Google

 8       Earth documents -- I'm sorry, communications

 9       between Google and ACI that certainly occurred

10       after the conversations that Mr. Jones had with

11       ACI in 2006; correct?

12               A.   I certainly considered the other

13       ones, but also pointed significantly to the

14       January 2006 document.

15               Q.   And the January 2006 document

16       isn't a lump sum paid up amount, is it?

17               A.   Actually if you look at the

18       agreement, it specifies a determination for a

19       lump sum amount because it talked under the

20       exclusive license of interest discounting which

21       relates to a lump sum.

22               Q.   You told us in your testimony that

23       we're not talking about an exclusive license for

24       the reasonable royalty; correct?
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1              A.   I responded to your question which

2    suggested that there wasn't any notion of a lump

3    sum and there is.

4              Q.   Let's talk about what's relevant

5    to your analysis.  Your analysis is for a

6    nonexclusive license; correct?

7              A.   Absolutely.

8              Q.   For that communication for the

9    nonexclusive license, that was a running

10   royalty, not a lump sum; correct?

11             A.   If you want to parse out those two

12   different bullet points, perhaps you could parse

13   it that way.

14             Q.   You parsed the exclusive and the

15   nonexclusive in your testimony, didn't you?

16             A.   Yes, because this is a

17   nonexclusive license agreement between the

18   parties.  But that's not to say that one

19   shouldn't consider what's stated in the bullet

20   point above it which is talking about lump sum

21   amounts.

22             Q.   For an exclusive license?

23             A.   For an exclusive license.

24             Q.   Now, you referenced over a hundred
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1347

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 1        licenses that you said were lump sum licenses.

 2        Do you remember?

 3                   A.   I did.   Mr. McClendon's deposition

 4        testimony on behalf of Google.

 5                   Q.   Did you see that testimony during

 6        this trial?

 7                   A.   I did not, no.

 8                   Q.   Are you aware of any evidence in

 9        this trial of those hundred agreements?

10                   A.   I presented in my testimony my

11        review of his deposition testimony that was done

12        on behalf of Google and he addressed a hundred

13        plus.

14                   Q.   And is there any evidence

15        regarding any of those agreements being

16        technically comparable?

17                   A.   If you're talking about evidence

18        presented to the jury as opposed to evidence

19        that was presented to me by Mr. Goodchild, I'm

20        not aware of it being presented to the jury.

21        But Dr. Goodchild did present information to me

22        for some of those agreements.

23                   Q.   And has there been any evidence

24        presented in this trial that any of those
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1348

1   agreements were for something essential to

2   Google Earth?

3   A.   The only information I'm aware of

4   in that regard is Dr. Goodchild's input that

5   there is comparable technology in some of those

6   cases specifically addressing the lump sum

7   agreements and viewed them to be technical

8   comparable.

9   Q.   And that's the information that he

10   did not impart to the jury during his testimony;

11   correct?

12   A.   That's my understanding, yes.

13   Q.   Now, when we went through the

14   various categories here, none of those included

15   searches on Google.com, correct, for categories

16   of revenues specifically?

17   A.   That's correct.

18   Q.   Would you agree that a large part

19   of Google's revenue results from advertisements

20   that pop up when you search on Google.com?

21   A.   That's certainly a big part of

22   Google.

23   Q.   And so that big part of Google,

24   you didn't include that anywhere in your slide;

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 1        correct?
 2                  A.   Well, I analyzed that issue to see
 3        if it's appropriate to include that.  I
 4        considered, for example, input from Mr. Birch
 5        who testified to the jury about that issue, and
 6        that is not appropriate for allocating to Google
 7        Earth.
 8                  Q.   So you chose not to include it in
 9        the revenues; correct?
10                  A.   That's correct.  My analysis does
11        not include something like that, which is far
12        reaching from the Google Earth.
13                  Q.   Were you here when Mr.  Bailey's
14        testimony was shown by video deposition?
15                  A.   I believe so, but I don't recall.
16        But I certainly have reviewed Mr. Bailey's
17        deposition testimony, and I also had a
18        conversation with Mr. Bailey.
19                  Q.   Are you aware of what the jury has
20        heard from Mr. Bailey?
21                  A.   I would have to have my
22        recollection refreshed.  I can't think of it as
23        I sit here, but I am aware of his testimony.
24                  Q.   Can we pull up Plaintiff's Trial
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 1          Exhibit Number 40, please.  And let's turn to --

 2          first of all, can we blow up the top of the

 3          document so we can see what we're looking at

 4          here.  The top title.

 5                    So you can see the search wikki up

 6          here.  Are you familiar with what this

 7          document -- what part of Google this document

 8          comes from?

 9               A.   I'm not sure of your question, but

10          I did discuss this document with Mr. Bailey.

11               Q.   Are you aware that it's from the

12          internal Google wikki?

13               A.   I think I have a recollection that

14          that's the case.

15               Q.   Could we turn to page three of the

16          document under the heading, Google Earth.  Blow

17          up all of the one with the heading Google Earth,

18          please, to start.

19                    So you see this is the section of

20          the document entitled Google Earth.  Do you see

21          that?

22               A.   Yes.  That's one of the things I

23          considered addressing that many users use Google

24          Earth only once to look at their house and then
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 1     stop using it.  That's one of the things I

 2     considered.

 3               Q.   Could you read for me the

 4     highlighted text?

 5               A.   Just the highlight, or do you want

 6     me to put it in context of the full --

 7               Q.   Let's start with the highlighting

 8     and if your counsel wants to do that, that's

 9     fine.

10               A.   "This would cause more users to

11     reuse this product and in turn trigger

12     Google.com traffic."

13               Q.   Thank you.  We can pull that down.

14               Do you remember discussing this

15     during your testimony?

16               A.   Yes, I do.

17               Q.   If I could get it to stay stable.

18               A.   That's kind of like Alfred

19     Hitchcock.

20               Q.   Yeah.  I'll do my best here.

21               It was part of your testimony;

22     right, Mr. Reed?

23               A.   It was, yes.

24               Q.   Did you forget to highlight this
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 1        part of the statute when you were doing your

 2        testimony?  The part that reads for the use made

 3        of the invention by the infringer?

 4                  A.   No, I didn't, I did not forget to

 5        highlight that.  I was highlighting to focus on

 6        the reasonable royalty for purposes of my

 7        testimony.  In every case I evaluate a

 8        reasonable royalty for the use of the invention

 9        by the alleged infringer.

10                  Q.   You chose not to highlight that

11        when you presented this to the jury; correct?

12                  A.   Correct.

13                  MR. HAWES:  No further questions,

14        Your Honor.

15                       REDIRECT EXAMINATION

16        BY MR. SNYDER:

17                  Q.   Mr. Reed, in preparing your

18        opinion, did you consider whether it was

19        appropriate to include revenue from other

20        categories of Google products or services beyond

21        Google Earth?

22                  A.   I actually did and I discussed

23        that issue with individuals at Google and I

24        analyzed the documents in that regard.
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 1              Q.   Did you identify what were

 2      appropriate to include?

 3              A.   Yes.  The element that was

 4      appropriate to include was the Chrome and

 5      Toolbar, the cost savings that I identified.

 6              Q.   ACI's counsel just showed you

 7      Plaintiff's Exhibit 40 which relates to cookie

 8      based advertising.

 9              A.   Yes.

10              Q.   And did you consider whether it

11      was appropriate to include revenue from any

12      Google searches as a result of the use of cookie

13      based advertising?

14              A.   Well, my understanding is the

15      cookie based advertising was never implemented

16      in that regard.  And the ad revenue that's

17      associated with Earth was included in my

18      analysis.

19              Q.   Have you heard testimony before

20      the jury about whether or not that was

21      implemented by Google?

22              A.   My understanding is the testimony

23      I heard is that it was not implemented.

24              Q.   Mr. Reed, in coming to your
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 1          conclusion of a $3 million royalty at the

 2          hypothetical negotiation of 2005, did you

 3          consider all uses made of the invention under

 4          your assumption that the patent was valid and

 5          infringed?

 6                    A.   Absolutely.  It's not different

 7          than other circumstances where you could have a

 8          company that sells products or in some cases

 9          provides the products at promotional value.

10          Every case I'm considering the use of the

11          technology that's alleged, and in value

12          associated with that and that's what I did here

13          as well.

14                    MR. SNYDER:  No further questions,

15          Your Honor.

16                    MR. HAWES:  No questions, Your

17          Honor.

18                    THE COURT:  All right.  Let's see

19          if the jury has any questions of this witness

20          and then we'll break for lunch.

21                    Okay.  The jury has no questions.

22                    Mr. Reed, thank you.  You're

23          excused.

24                    THE WITNESS:  Thank you, Your
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1355

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 1        Honor.
 2                     MR. SNYDER:  Your Honor, before we
 3        break for lunch, may I read the exhibits into
 4        the record or should we do that when we return?
 5                     THE COURT:  You can do that now.
 6                     MR. SNYDER:  Defendants move into
 7        evidence the following exhibits:  DTX 1003.  DTX
 8        1011.  DTX 1040.  DTX 1055.  DTX 1060.  DTX
 9        1061.  DTX 1062.  DTX 1113.  DTX 1114.  DTX
10        1119.  DTX 1132.  DTX 1139.  DTX 1141.  DTX
11        1144.  DTX 1145.  PTX 213.  PTX 214.  PTX 274.
12        And PTX 342.
13                     MR. HAWES:  No objections, Your
14        Honor.
15                     THE COURT:  Without objection they
16        are admitted.
17                     MR. SNYDER:  Thank you, Your
18        Honor.
19                     THE COURT:  Mr. Hawes, did you
20        have any exhibits?
21                     MR. HAWES:  Not that haven't been
22        previously admitted, Your Honor.
23                     THE COURT:  Thank you.  All right.
24                     Why don't we take our lunch break
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1   and come back at quarter of 2:00 and the jury

2   should remember not to discuss the case or do

3   any research in the meantime.

4   Thank you.

5   (Jury leaving the courtroom at

6   12:46 p.m.)

7   THE COURT: Be seated, please.

8   Where are we in terms of how much

9   longer we have? Are we going to be able to

10   finish the testimony today?

11   MR. PARTRIDGE: Yes, Your Honor,

12   we will. When we come back from lunch we have

13   some motions to make. I rather do it at the end

14   of the lunch hour before the jury comes back in

15   here, so we can maybe be back here maybe ten

16   minutes earlier.

17   THE COURT: Why don't we do that.

18   Let's meet at twenty-five of.

19   MR. SNYDER: That should work,

20   Your Honor.

21   THE COURT: Thank you.

22   MR. PARTRIDGE: Thank you.

23   MR. SNYDER: Thank you.

24   (A luncheon recess was taken.)

1357

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 1                    THE COURT:  Be seated.  Motions?

 2                    MR. PARTRIDGE:  Yes, Your Honor.

 3       And Mr. Spears will make the motions for us.

 4       Thank you, Your Honor.

 5                    MR. SPEARS:  They haven't rested

 6       yet.

 7                    MR. PARTRIDGE:  Oh, they haven't

 8       rested.

 9                    MR. SNYDER:  We can rest when the

10       jury gets back, but for these purposes the

11       Defendant rests.

12                    MR. SPEARS:  Thanks.  Plaintiff's

13       move, under Rule 50A for a directed verdict on

14       infringement as to all steps of all asserted

15       claims, very specifically as to Mr. Castleman.

16       As to the preamble and steps A through E of

17       Claim 1, that evidence is unrefuted.  As to Step

18       F, Doctor Goodchild admitted on

19       cross-examination that in the default setting of

20       the accused products, course define zooming is

21       done exactly in the way of Step F.  As to Steps

22       F and G in combination, Doctor Goodchild's

23       opinions are quite frankly incomprehensible and

24       are based on evidence that was created for this
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1358

1   lawsuit in part by Google's lawyers.

2   We also move for a directed

3   verdict on the defense of anticipation based on

4   the T_Vision reference. We do not think there

5   is clear and convincing evidence of publication

6   and as to multiple claim limitations, Google's

7   experts' opinions we believe cross the line

8   between a permissible interpretation of the

9   reference and an impermissible supplementation

10   of its content.

11   We also move for directed verdict

12   on Google's defense of public use based on the

13   TerraVision system. There is little, if any

14   evidence as to what, if anything of the claimed

15   invention is ascertainable to the public, which

16   is required by law. There's no evidence that

17   the TerraVision system was ready for patenting,

18   which is also required by law. As to the

19   evidence that Google did present, we have a

20   hodgepodge of documents with very little linking

21   testimony that links those documents to specific

22   identifiable instances of public use. And the

23   content of the documents that Google has cited

24   in support of this alleged public use are often

1   times inconsistent with what's actually required

2   by the claims in the patent in suit.

3   We also move for a directed

4   verdict on Google's defenses of obviousness.

5   The pre-trial order acknowledges that one such

6   defense is based on the combination of the SRI

7   technical note with the Magic project report.

8   There's been absolutely no evidence adduced at

9   trial to support a finding of obviousness with

10   respect to that combination either alone or in

11   combination with any other references and indeed

12   no evidence has been presented to prove up the

13   Magic project technical report is a printed

14   publication in the first instance.

15   We also move for a directed

16   verdict on all other bases of obviousness stated

17   by Google either in the one pre-trial or at

18   trial and I would focus the Court's attention

19   especially on those obviousness defenses

20   premised on SRI TerraVision. In all instances

21   these defenses are simply Doctor Goodchild

22   stating well, if it's not there, it would have

23   been obvious to a person of ordinary skill in

24   the art based on my understanding of that and

1360

1   general knowledge and whatnot. Doctor Goodchild

2   in no instance with respect to his obviousness

3   positions based on SRI TerraVision has in no

4   instance undertaken or come close to undertaking

5   the sort of analysis that's required by diagram

6   versus John dear. We believe the same fault

7   lies with respect to Doctor Goodchild's

8   obviousness analysis beginning with the T_Vision

9   reference as applied to Claims 1, 14 and 28.

10   THE COURT: Mr. Snyder, where are

11   we on which of the limitations are in dispute as

12   far as anticipation is concerned or Mr.

13   Williamson?

14   MS. WILLIAMSON: I think that's

15   the question for Plaintiffs, because our

16   understanding is the only evidence that will be

17   presented in rebuttal of the invalidity case are

18   with respect to I believe B and C as to --

19   THE COURT: I wasn't talking about

20   the invalidity case. I was talking about the

21   infringement case. What's your position on

22   infringement with respect to the A through E

23   limitations? I know you presented evidence on F

24   and G. But what's your position about that?

1   MS. WILLIAMSON: Our argument will

2   be based on the absence of F and G.

3   THE COURT: Okay. So what I'm

4   inclined to do, then, we'll discuss this later

5   at the charge conference, is instruct the jury

6   that there's no dispute as to A through E. Is

7   that what we're going to be able to do?

8   MS. WILLIAMSON: I think we can do

9   that as part of the instructions, Your Honor.

10   THE COURT: I think that will take

11   care of that aspect of it. And then -- I don't

12   need to hear argument on the rest of it unless

13   there's something else that is not disputed.

14   Okay. So the motions denied.

15   MR. SPEARS: Very well, Your

16   Honor.

17   We have for purposes at this point

18   defendants resting their case. I would like to

19   preview the very limited rebuttal case that we

20   would like to put on.

21   As you recall after Dr. Goodchild

22   testified, the jury returned -- we put two

23   questions to the jury. And we think it might be

24   helpful to call Dr. Castleman in our rebuttal

1362

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 1        case for the limited purpose of responding to

 2        the first question.

 3                    THE COURT:  I'm sorry, what are

 4        the two questions?

 5                    MR. SPEARS:  The second question

 6        had to do with analysis of the earlier versions

 7        of Earth.

 8                    MR. PARTRIDGE:  I think Mr. Spears

 9        misspoke.  He meant the two questions Your Honor

10        read to the witness that came from the jury.

11                    THE COURT:  I see of.  Start

12        again.

13                    MR. SPEARS:  So it's the second

14        question -- the first question is -- the first

15        question is the one that we think the jury might

16        want to hear from Dr. Goodchild on, and that has

17        to do with whether -- how performance of Earth

18        would be affected by whether you do or do not

19        carry out everything in step F.  The second

20        question dealt with Dr. Goodchild's

21        consideration of information going back to 2005,

22        we wouldn't want that question put to

23        Dr. Castleman.

24                    So what we envision is our
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 1    rebuttal case would consist entirely of putting

 2    Dr. Castleman on the stand, that first question

 3    would be put to it, he responds it to, Google's

 4    lawyers would have a question or two by way of

 5    follow-up, and that would be it.  The evidence

 6    would close.  But with respect to our rebuttal

 7    case and Google would have no surrebuttal.

 8                    THE COURT:  Okay.  Mr. Snyder.

 9                    MR. SNYDER:  If that's the way the

10    rebuttal case proceeds, Your Honor, we would not

11    have a surrebuttal.

12                    THE COURT:  Okay.  So are we ready

13    to call the jury back in.

14                    MR. PARTRIDGE:  The one thing I

15    would add, Your Honor, is that we think you

16    should read the question to Dr. Castleman just

17    as you did to Dr. Goodchild, to read that same

18    one question that you read to Dr. Goodchild, if

19    that's makes sense to do it that way.

20                    MR. WILLIAMSON:  I think we would

21    object to that procedure, Your Honor.  I'll

22    explain why.

23                    MR. PARTRIDGE:  We're fine.

24                    THE COURT:  I think it would be
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1364

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 1        better, Mr. Partridge, if you read the question.

 2                    MR. SPEARS:  Can I borrow the

 3        question?

 4                    MR. SNYDER:  One last thing before

 5        we bring the jury back, Your Honor.  We have a

 6        revised verdict form, you mentioned that you

 7        wanted to discuss it at this afternoon's

 8        conference, which we understood, we have made

 9        some revisions, particularly in light of the

10        evidence, one of which is, for example, no

11        longer requesting separate verdicts for

12        individual products.

13                    Would you like us to bring that to

14        the conference?  Would you like us to file it?

15                    THE COURT:  I don't think you need

16        to bring it to the conference.  I'm

17        contemplating, as long as there is objection,

18        that this conference is going to be off the

19        record.  It's just an informal discussion and

20        then we'll have a formal charge conference in

21        which you can make objections to the things that

22        weren't resolved informally.

23                    MR. SNYDER:  Very good.

24                    MR. PARTRIDGE:  Your Honor, I
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1   mentioned the other day we had a few other

2   instructions. This is consistent with what

3   Mr. Snyder asking about, whether you want any of

4   this in advance or we wait until the formal

5   conference.

6   THE COURT: Sound to me like we'll

7   be able to have our informal conference much

8   earlier than anticipated.

9   MR. PARTRIDGE: I think that's

10   right. You had set it for 5:15. We would like

11   to chat for an hour or so about the evidence and

12   the changes we would suggest so we could do it

13   earlier, maybe 3:30 or 4:00, whatever.

14   THE COURT: That would be fine, if

15   we could do it, I understand that you need some

16   time. If we could do it at four o'clock.

17   MR. PARTRIDGE: 4:00 would be

18   perfect.

19   THE COURT: And I think Chief

20   Judge Stark has been kind enough to lend us his

21   conference room, so we'll be there. And I think

22   maybe the thing to do would be to just come to

23   the courtroom here at four o'clock and then

24   either our deputy or my law clerk will bring you

1366

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 1      back into the conference room.

 2                    MR. PARTRIDGE:  Very well.

 3                    THE COURT:  I think I don't

 4      actually want to show you the question because I

 5      want to maintain the juror confidentiality as to

 6      who wrote this.  I'll read you the question and

 7      then you can --

 8                    MR. SPEARS:  Okay.

 9                    THE COURT:  "How does Google Earth

10      show a smooth zoom if all steps of F are not

11      performed?"

12                    MR. SPEARS:  And I'll read back

13      what I have written to make certain we're on the

14      same page.

15                    "How does Google Earth show a

16      smooth zoom if all steps of F are not

17      performed?"

18                    THE COURT:  Correct.

19                    MR. SPEARS:  Okay.  I think we're

20      ready to bring the jury back in.

21                    (Jury entering the courtroom at

22      1:46 p.m.)

23                    THE COURT:  Welcome back members

24      of the jury.  Please be seated.
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1367

1   Mr. Snyder.

2   MR. SNYDER: Thank you, Your

3   Honor. The defendant, Google, rests.

4   THE COURT: Okay. Thank you. And

5   Mr. Spears, do you have a rebuttal case? It's

6   now time for the plaintiff's rebuttal case.

7   MR. SPEARS: Yes. And we will

8   call as our only witness in rebuttal, Dr. Ken

9   Castleman.

10   THE COURT: Do we need to re-swear

11   the witness? I think we don't need to re-swear

12   the witness. Dr. Castleman, you understand

13   you're still under oath?

14   THE WITNESS: Yes, I understand.

15 BY MR. SPEARS:

16   Q.   Dr. Castleman, how does Google

17   Earth show a smooth zoom if all steps of F are

18   not performed?

19   A.   It doesn't. Google Earth doesn't

20   work that way. And you don't have to use it

21   very long to figure out that it doesn't. If it

22   did and you did a zoom, you would be looking at

23   a blurry picture while the software ran up and

24   down the tree finding nodes, culling nodes and

```
 1        prioritizing nodes, requesting nodes, and then

 2        waiting for those images to come back from the

 3        servers.

 4                    So you would be looking at a

 5        blurry image for a second plus or minus

 6        depending on -- depending on internet speed at

 7        that time of day.

 8                    But that's not what happens.  It

 9        executes step F over and over and over, so what

10        you actually see when you do a zoom is the image

11        starts off blurry, but it immediately begins

12        getting sharper and sharper and sharper as step

13        F is executed over and over and over again.

14                    MR. SPEARS:  Pass the witness.

15                    MR. WILLIAMSON:  No questions,

16        Your Honor.

17                    THE COURT:  Okay.  Thank you

18        Dr. Castleman.  You're excused.  I guess we

19        should ask the jury if they have any further

20        questions.  Let's do that.

21                    Okay.  There are no questions.

22        Doctor Castleman, you're excused.

23                    MR. SPEARS:  ACI rests.

24                    MR. SNYDER:  Google rests, Your
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 1      Honor.

 2                  THE COURT:  All right.  Thank you.

 3      And members of the jury, I think we're ending

 4      the testimony a bit earlier than we had

 5      expected.  The lawyers and I have things that we

 6      need to do before I give you the final jury

 7      instructions, which will happen first thing

 8      tomorrow morning.  And that will be followed by

 9      the closing arguments of both sides.  So for the

10      moment today you're excused.  We'll see you at

11      8:45 tomorrow morning.  And again, it's very

12      important not to discuss this case with anybody,

13      not to do any research and in particular, do not

14      discuss the case among yourselves until you

15      actually begin deliberations which will not

16      happen until the closing arguments are

17      presented.  So we'll see you tomorrow morning

18      and thank you for your attention.

19                  (Jury exits.)

20                  THE COURT:  Okay.  Be seated.  Is

21      there anything else we need to address?

22                  MR. PARTRIDGE:  Nothing from the

23      Plaintiff, Your Honor.

24                  MS. WILLIAMSON:  We have a motion
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 1      to make, Your Honor.

 2                  THE COURT:  Yeah.

 3                  MS. WILLIAMSON:  Your Honor,

 4      Google moves pursuant to Rule 50A of the Federal

 5      Rules of Civil Procedure for judgment as a

 6      matter of law that all of the asserted claims of

 7      the '550 Patent are invalid either as a result

 8      of anticipation or obviousness.  There has been

 9      clear and convincing evidence that's now clear

10      and convincing unrebutted evidence that each and

11      every element of the asserted claims is found

12      literally in the references that were presented

13      to the jury, that includes the SRI TerraVision

14      system and the T-Vision publication.  If they

15      are not found as a matter of anticipation, there

16      is clear and convincing evidence that is now

17      unrebutted in that there was no evidence put on

18      by Plaintiff as to the validity of their patent,

19      that each of those matters are -- that each of

20      those matters is established, that the '550

21      Patent is invalid because of the evidence

22      presented by Google.

23                  THE COURT:  Okay.  That motion is

24      denied.  Anything else at this point?
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1371

1   MS. WILLIAMSON: Yes. Your Honor,

2   we renew our previous Rule 50A motion with

3   respect to the infringement case put on by ACI.

4   I'm not going to set forth the grounds for that,

5   but we'll renew it after the rest of the close

6   of evidence by Google as well, your honor.

7   THE COURT: Okay. Thank you.

8   That motion is denied as well.

9   MS. WILLIAMSON: Thank you.

10   THE COURT: All right. Are we

11   ready to recess? And we'll see you back here at

12   4 and by agreement of the parties, the informal

13   charge conference will not be on the record.

14   Okay. Thank you.

15   (Court adjourned at 2:05 p.m.)

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 1   State of Delaware )
                      )
 2   New Castle County )

 3

 4

 5                    CERTIFICATE OF REPORTER

 6

 7         I, Dale C. Hawkins, Registered Merit

 8   Reporter, Certified Shorthand Reporter, and Notary

 9   Public, do hereby certify that the foregoing record,

10   Pages 1,154 to 1,372 inclusive, is a true and

11   accurate transcript of my stenographic notes taken on

12   May 26, 2016, in the above-captioned matter.

13

14         IN WITNESS WHEREOF, I have hereunto set my

15   hand and seal this 26th day of May 2016, at

16   Wilmington.

17

18

19              /s/ Dale C. Hawkins

20              Dale C. Hawkins, RMR

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22

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24
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$20 [6] - 1302:11, 1303:13, 1340:8, 1340:11, 1340:17, 1340:19
$3.18 [1] - 1318:24
$400 [1] - 1187:9
$500 [1] - 1187:14
$600,000 [2] - 1294:5, 1298:8
'550 [39] - 1168:17, 1169:12, 1169:17, 1170:10, 1171:1, 1172:19, 1176:6, 1177:19, 1178:9, 1179:2, 1179:10, 1180:3, 1180:15, 1181:4, 1181:13, 1181:16, 1181:24, 1182:15, 1183:4, 1184:5, 1185:7, 1190:22, 1207:20, 1217:4, 1227:24, 1229:5, 1249:15, 1249:21, 1271:10, 1276:1, 1287:9, 1288:13, 1290:8, 1290:24, 1296:18, 1328:18, 1344:9, 1370:7, 1370:20
'897 [1] - 1288:13
'95 [4] - 1217:14, 1218:6, 1218:17
/s [1] - 1372:19
000693 [1] - 1264:8
015 [1] - 1285:17
0206 [1] - 1285:4
1 [40] - 1157:24, 1168:16, 1168:20, 1168:22, 1169:11, 1169:17, 1170:12, 1173:14, 1173:19, 1174:13, 1175:24, 1176:2, 1176:5, 1176:6, 1176:8, 1177:7, 1177:19, 1178:12, 1179:2, 1179:5, 1179:10, 1181:6, 1185:8, 1185:14, 1201:10, 1205:1, 1206:16, 1209:16, 1212:1, 1212:4, 1212:8, 1222:10, 1241:6, 1247:12, 1322:2, 1324:15, 1324:21, 1325:10, 1357:17, 1360:9
1's [3] - 1173:16, 1177:21, 1178:23
1,154 [1] - 1372:10

1,372 [1] - 1372:10
1.8 [1] - 1323:9
10 [5] - 1195:10, 1214:4, 1270:20, 1285:1
100 [2] - 1298:19, 1298:21
1001A [8] - 1171:10, 1173:1, 1173:16, 1175:23, 1178:11, 1180:13, 1182:14, 1184:3
1003 [3] - 1282:24, 1283:3, 1355:7
1003.1 [1] - 1239:13
1004 [1] - 1282:23
1011 [1] - 1355:8
102 [1] - 1240:10
1023 [4] - 1170:21, 1196:10, 1206:11, 1209:15
1034 [1] - 1240:3
1036 [1] - 1170:21
1037 [1] - 1170:21
103A [1] - 1179:7
1040 [1] - 1355:8
1055 [1] - 1355:8
1060 [2] - 1315:21, 1355:8
1061 [2] - 1306:8, 1355:9
1062 [2] - 1306:9, 1355:9
1065 [1] - 1219:14
1071 [1] - 1286:8
1076 [2] - 1183:17, 1184:4
1087 [1] - 1170:21
1088 [1] - 1170:21
1094 [1] - 1283:1
10:30 [1] - 1156:9
11 [1] - 1255:2
1113 [1] - 1355:9
1114 [1] - 1355:9
1119 [2] - 1316:5, 1355:10
112.3 [1] - 1316:10
1132 [1] - 1355:10
1138 [1] - 1163:14
1139 [2] - 1163:14, 1355:10
114 [1] - 1315:20
1140 [1] - 1163:14
1141 [1] - 1355:10
1144 [1] - 1355:11
1145 [1] - 1355:11
115 [1] - 1302:18
1157 [2] - 1259:6, 1261:17

1193 [1] - 1201:2
11:00 [1] - 1260:15
11:03 [1] - 1261:11
11:30 [1] - 1156:10
12 [1] - 1213:21
12:46 [1] - 1356:6
13th [2] - 1259:9, 1261:19
14 [16] - 1169:3, 1171:4, 1180:1, 1180:3, 1180:4, 1181:1, 1181:6, 1181:13, 1181:24, 1185:9, 1185:14, 1213:18, 1257:4, 1257:10, 1257:18, 1360:9
14-217-RGA [1] - 1154:5
1498 [1] - 1311:19
15 [8] - 1208:3, 1208:5, 1285:19, 1321:4, 1321:12, 1322:16, 1329:13, 1330:2
15th [1] - 1195:10
160.8 [1] - 1315:19
17 [5] - 1172:11, 1215:15, 1215:16, 1215:19, 1264:6
18 [6] - 1206:12, 1213:20, 1215:11, 1216:5, 1216:21, 1217:1
1980s [1] - 1278:12
1990's [1] - 1190:8
1991 [1] - 1175:6
1993 [4] - 1202:20, 1203:6, 1203:13, 1204:10
1994 [3] - 1175:2, 1203:16, 1204:17
1995 [9] - 1170:4, 1174:24, 1179:21, 1184:13, 1203:16, 1204:17, 1263:21, 1264:14, 1264:23
1996 [1] - 1172:11
1998 [1] - 1193:15
1:46 [1] - 1366:22
1A [3] - 1174:9, 1174:16, 1201:10
2 [8] - 1182:8, 1182:9, 1182:12, 1182:15, 1182:16, 1212:7, 1212:8, 1212:15
2.5 [1] - 1323:15
2.9 [1] - 1319:12
200 [2] - 1248:2

1194:14, 1195:4, 1195:12, 1256:2, 1280:10
2002 [1] - 1256:2
2003 [2] - 1256:3, 1258:10
2005 [30] - 1159:12, 1159:15, 1159:18, 1274:13, 1274:22, 1279:18, 1280:1, 1280:11, 1280:19, 1286:24, 1288:18, 1302:19, 1312:20, 1312:24, 1322:9, 1323:21, 1323:22, 1325:1, 1334:4, 1334:8, 1334:14, 1334:16, 1335:2, 1335:9, 1335:22, 1336:7, 1336:19, 1337:2, 1354:2, 1362:21
2005-2006 [2] - 1286:21, 1302:5
2006 [24] - 1159:3, 1159:6, 1259:9, 1259:10, 1261:19, 1282:4, 1282:5, 1282:20, 1283:7, 1283:9, 1288:23, 1299:11, 1302:20, 1303:10, 1310:23, 1321:24, 1324:21, 1325:6, 1344:13, 1344:18, 1345:11, 1345:14, 1345:15
2007 [2] - 1295:13, 1297:24
2008 [3] - 1191:10, 1304:21, 1305:2
2009 [1] - 1267:22
2010 [13] - 1274:18, 1275:2, 1280:16, 1288:17, 1312:15, 1313:2, 1316:17, 1323:8, 1334:9, 1334:24, 1335:4, 1335:7, 1335:13
2011 [1] - 1295:16
2012 [1] - 1256:1
2013 [3] - 1275:21, 1314:3, 1317:22
2015 [1] - 1162:9
2016 [7] - 1154:9, 1288:14, 1312:16, 1313:2, 1318:7, 1372:12, 1372:15
206 [1] - 1285:3
208 [2] - 1322:22, 1323:3

208.3 [1] - 1319:20
20th [1] - 1270:19
21 [1] - 1309:21
213 [2] - 1309:23, 1355:11
214 [1] - 1355:11
22,000 [1] - 1303:15
23 [3] - 1205:3, 1215:22, 1216:1
235,000 [1] - 1303:12
25 [3] - 1233:20, 1252:9, 1252:12
250 [1] - 1248:5
26 [2] - 1154:9, 1372:12
26th [1] - 1372:15
27 [5] - 1229:2, 1232:20, 1233:12, 1235:7, 1235:11
274 [2] - 1302:18, 1355:11
28 [14] - 1169:3, 1171:4, 1180:11, 1180:15, 1181:1, 1181:6, 1181:13, 1181:24, 1185:9, 1185:14, 1238:3, 1238:14, 1311:19, 1360:9
299 [1] - 1240:23
2:00 [1] - 1356:1
2:05 [1] - 1371:15
3 [23] - 1169:3, 1171:4, 1182:6, 1182:8, 1182:11, 1183:2, 1183:4, 1183:5, 1184:5, 1184:10, 1185:11, 1185:16, 1274:16, 1275:17, 1297:7, 1311:12, 1322:2, 1323:18, 1324:1, 1324:21, 1334:22, 1335:3, 1354:1
3.0 [1] - 1280:11
30 [2] - 1252:9, 1252:12
30-day [1] - 1272:10
309 [1] - 1220:12
313 [1] - 1219:18
339 [1] - 1265:7
342 [1] - 1355:12
352 [1] - 1194:15
36 [1] - 1246:10
38 [4] - 1231:4, 1231:13, 1231:14, 1231:17
3:30 [1] - 1365:13
4 [2] - 1287:3, 1371:12
4.3 [1] - 1317:7

40 [2] - 1350:1, 1353:7
419 [2] - 1194:8, 1254:16
420 [2] - 1191:5, 1254:17
48.5 [1] - 1316:3
49 [1] - 1199:8
4:00 [2] - 1365:13, 1365:17
5 [6] - 1154:3, 1178:9, 1215:18, 1318:2, 1318:5, 1318:11
50 [8] - 1169:5, 1181:9, 1268:17, 1311:7, 1321:16, 1322:5, 1322:19, 1323:3
500 [1] - 1273:14
50A [3] - 1357:13, 1370:4, 1371:2
540 [2] - 1196:15, 1273:5
55 [1] - 1204:21
59 [1] - 1209:11
5:15 [1] - 1365:10
6 [1] - 1287:3
600,000 [3] - 1297:8, 1323:11, 1324:7
608(b [1] - 1160:23
65 [4] - 1168:10, 1168:11, 1216:18, 1216:23
6A [1] - 1154:10
7 [1] - 1275:15
7-day [1] - 1272:9
7.55 [1] - 1318:4
72 [1] - 1171:9
75 [4] - 1180:23, 1221:24, 1230:8, 1231:9
77 [1] - 1223:24
78 [1] - 1225:20
8 [1] - 1275:17
81.3 [1] - 1319:1
844 [1] - 1154:11
86 [1] - 1182:2
89.9 [1] - 1318:1
8:31 [1] - 1154:9
8:45 [1] - 1369:11
9 [3] - 1166:24, 1167:13, 1259:5
93 [1] - 1157:8
95 [3] - 1171:13, 1171:24, 1264:4
990 [1] - 1264:13
9:00 [1] - 1167:22
9th [8] - 1242:7, 1242:8, 1242:13, 1242:14, 1242:16, 1242:17, 1264:13,

1264:23
a.m [3] - 1154:9, 1167:22, 1261:11
A97 [1] - 1280:8
able [11] - 1156:11, 1160:5, 1166:19, 1232:16, 1293:4, 1324:17, 1333:6, 1336:14, 1356:9, 1361:7, 1365:7
above-captioned [1] - 1372:12
absence [1] - 1361:2
absolutely [8] - 1175:10, 1282:12, 1311:17, 1331:22, 1334:13, 1346:7, 1354:6, 1359:8
AC [1] - 1258:9
AC's [2] - 1262:13, 1264:17
access [1] - 1164:21
accessing [1] - 1175:6
accompany [1] - 1275:6
accomplished [1] - 1198:7
according [4] - 1176:18, 1201:24, 1243:14, 1243:24
account [1] - 1279:10
accounting [6] - 1274:17, 1274:20, 1280:16, 1312:14, 1334:19, 1335:10
accurate [3] - 1246:3, 1264:23, 1372:11
accused [4] - 1271:7, 1275:12, 1275:21, 1357:20
achieve [2] - 1166:18, 1197:11
achieved [1] - 1202:23
ACI [82] - 1175:12, 1180:2, 1185:9, 1187:9, 1187:18, 1190:15, 1212:22, 1213:1, 1213:5, 1217:24, 1218:1, 1218:3, 1220:7, 1224:2, 1254:23, 1255:22, 1255:23, 1255:24, 1256:3, 1256:9, 1256:17, 1256:18, 1256:23, 1257:4, 1257:9, 1257:20, 1257:24, 1258:8, 1258:20, 1258:21, 1259:5, 1262:23, 1263:1,

1271:4, 1272:6, 1272:12, 1275:1, 1277:24, 1279:14, 1280:23, 1281:18, 1281:21, 1281:23, 1282:5, 1282:13, 1282:20, 1283:1, 1283:11, 1284:22, 1286:14, 1287:5, 1287:8, 1287:12, 1287:17, 1287:20, 1288:20, 1294:15, 1294:18, 1294:20, 1295:23, 1296:15, 1297:1, 1299:14, 1300:13, 1310:23, 1313:1, 1321:13, 1321:24, 1323:11, 1324:10, 1324:17, 1337:6, 1338:13, 1338:17, 1338:20, 1338:23, 1344:20, 1345:9, 1345:11, 1368:23, 1371:3
ACI's [11] - 1189:22, 1190:3, 1190:15, 1193:13, 1198:20, 1213:7, 1258:11, 1273:22, 1276:23, 1280:24, 1353:6
ACI_00001156 [2] - 1259:6, 1261:17
ACI_00009690 [1] - 1264:8
acknowledged [1] - 1288:20
acknowledges [1] - 1359:5
acknowledgment [1] - 1289:6
acquiring [1] - 1300:19
acquisition [2] - 1253:12, 1300:18
Acrobat [2] - 1308:22, 1309:11
activated [1] - 1303:5
activation [1] - 1343:24
activations [6] - 1272:10, 1302:19, 1303:3, 1303:11, 1303:21, 1333:17
activity [1] - 1281:22
actual [8] - 1263:11, 1323:12, 1323:13, 1332:15, 1336:14, 1336:15
ad [26] - 1305:5, 1305:9, 1305:10,

1305:12, 1305:15, 1305:24, 1306:2, 1306:6, 1306:13, 1307:2, 1307:3, 1307:5, 1313:17, 1313:18, 1313:19, 1314:5, 1317:4, 1317:8, 1317:24, 1318:8, 1318:9, 1318:13, 1342:19, 1343:2, 1353:16
Adam [1] - 1167:5
add [3] - 1316:21, 1318:9, 1363:15
added [6] - 1210:9, 1222:5, 1275:20, 1314:2, 1314:6, 1318:6
addition [1] - 1304:11
additional [13] - 1156:18, 1183:1, 1240:7, 1298:10, 1300:23, 1301:9, 1309:1, 1314:23, 1318:6, 1340:21, 1341:1, 1341:3, 1341:4
address [15] - 1156:11, 1157:6, 1158:13, 1162:9, 1192:1, 1271:3, 1272:9, 1275:10, 1283:13, 1283:14, 1307:17, 1313:15, 1327:12, 1329:10, 1369:21
addressed [22] - 1202:22, 1203:10, 1204:14, 1211:20, 1268:10, 1277:22, 1278:9, 1280:6, 1289:20, 1301:18, 1305:17, 1306:10, 1315:3, 1317:5, 1322:15, 1323:3, 1324:10, 1325:10, 1329:24, 1337:11, 1342:1, 1347:12
addresses [2] - 1300:22, 1314:1
addressing [12] - 1182:7, 1270:11, 1270:13, 1279:18, 1281:1, 1282:22, 1309:17, 1313:1, 1316:17, 1317:21, 1348:6, 1350:23
adduced [1] - 1359:8
adequate [1] - 1275:8
adjourn [1] - 1166:24

adjourned [1] - 1371:15
admitted [9] - 1165:6, 1165:17, 1167:7, 1254:14, 1254:19, 1265:11, 1355:16, 1355:22, 1357:18
Adobe [10] - 1308:19, 1308:22, 1308:24, 1309:6, 1309:9, 1309:11, 1309:12, 1309:14, 1309:16, 1309:19
ads [11] - 1301:8, 1305:17, 1306:2, 1313:20, 1314:10, 1317:7, 1341:19, 1341:20, 1342:14, 1342:15, 1342:21
advance [1] - 1365:4
advantageous [1] - 1299:1
advertisements [1] - 1348:19
advertising [3] - 1353:8, 1353:13, 1353:15
advised [2] - 1157:11, 1160:15
affected [1] - 1362:18
afraid [1] - 1158:14
afternoon [4] - 1169:7, 1260:20, 1326:3, 1326:4
afternoon's [1] - 1364:7
afterwards [2] - 1158:7, 1331:24
AG [1] - 1263:3
agencies [1] - 1304:17
ago [6] - 1266:23, 1289:1, 1294:9, 1316:2, 1318:3, 1319:8
agree [11] - 1156:20, 1164:15, 1199:20, 1211:6, 1250:7, 1251:2, 1326:5, 1326:14, 1329:22, 1330:24, 1348:18
agreed [11] - 1156:8, 1156:18, 1156:22, 1157:22, 1162:12, 1165:10, 1170:1, 1246:2, 1323:23, 1337:2, 1337:6
agreement [28] - 1156:6, 1274:7, 1280:2, 1290:18, 1291:9, 1294:10,

1295:12, 1295:21,
1296:10, 1297:14,
1297:15, 1297:18,
1297:23, 1298:7,
1299:6, 1309:6,
1309:8, 1309:10,
1309:19, 1324:6,
1326:10, 1327:10,
1328:17, 1345:18,
1346:17, 1371:12
agreements [17] -
1259:24, 1260:3,
1261:3, 1272:11,
1289:11, 1289:15,
1290:5, 1297:19,
1297:20, 1298:15,
1298:20, 1298:21,
1347:9, 1347:15,
1347:22, 1348:1,
1348:7
ahead [4] - 1166:7,
1183:19, 1192:19,
1221:16
akin [1] - 1286:1
Alfred [1] - 1351:18
algorithms [1] -
1208:12
alleged [6] - 1277:8,
1280:13, 1331:8,
1352:9, 1354:11,
1358:24
allocated [3] -
1314:11, 1318:4,
1318:23
allocating [1] - 1349:6
allocation [4] -
1315:11, 1318:2,
1319:9, 1319:12
allow [2] - 1161:8,
1197:3
allowed [6] - 1160:22,
1161:17, 1207:9,
1260:12, 1336:13,
1336:23
allowing [1] - 1178:16
allows [2] - 1226:4,
1226:15
alone [2] - 1185:4,
1359:10
aloud [1] - 1216:7
alternative [1] -
1181:11
alternatively [1] -
1335:1
American [1] -
1211:16
amount [36] - 1196:1,
1271:3, 1274:8,
1274:15, 1281:11,
1289:4, 1290:15,

1292:10, 1294:5,
1294:11, 1296:10,
1297:4, 1297:5,
1298:7, 1299:8,
1305:12, 1312:8,
1317:10, 1319:18,
1322:21, 1323:1,
1323:8, 1323:9,
1323:13, 1323:17,
1323:24, 1332:10,
1332:11, 1332:13,
1332:18, 1335:8,
1335:14, 1337:10,
1338:1, 1345:16,
1345:19
amounts [6] - 1192:8,
1299:18, 1315:17,
1323:19, 1337:12,
1346:21
analyses [2] - 1250:8,
1322:4
analysis [70] -
1168:19, 1168:24,
1169:8, 1173:3,
1178:22, 1181:20,
1199:13, 1203:8,
1204:13, 1248:13,
1248:14, 1248:20,
1249:1, 1259:23,
1260:2, 1265:16,
1266:17, 1268:2,
1268:3, 1270:14,
1271:15, 1271:18,
1271:23, 1273:17,
1273:22, 1275:23,
1276:9, 1276:20,
1278:10, 1278:11,
1282:10, 1282:17,
1295:17, 1297:3,
1297:11, 1300:7,
1305:4, 1306:15,
1309:5, 1310:1,
1310:13, 1310:21,
1311:16, 1312:2,
1314:12, 1315:23,
1316:4, 1317:1,
1319:3, 1319:13,
1320:6, 1321:9,
1321:19, 1322:11,
1324:9, 1326:9,
1329:24, 1332:14,
1333:9, 1335:23,
1338:16, 1344:3,
1346:5, 1349:10,
1353:18, 1360:5,
1360:8, 1362:6
analyze [5] - 1214:16,
1273:9, 1273:21,
1280:18, 1330:23
analyzed [6] -

1204:18, 1269:5,
1274:4, 1274:6,
1349:2, 1352:24
analyzing [2] -
1273:18, 1280:4
Andreovits [2] -
1254:22
Android [2] - 1275:17,
1275:18
Ang [1] - 1168:10
Angeles [2] - 1266:17,
1267:3
angle [1] - 1176:10
angles [1] - 1206:2
animation [16] -
1233:16, 1233:23,
1234:17, 1235:5,
1235:9, 1235:13,
1235:17, 1235:18,
1235:20, 1236:1,
1236:5, 1245:8,
1245:11, 1245:16,
1246:5, 1248:17
annual [3] - 1315:17,
1340:8, 1340:11
answer [8] - 1192:12,
1192:17, 1216:8,
1217:5, 1221:14,
1241:12, 1252:7,
1253:9
answered [3] -
1221:9, 1233:5,
1257:17
anticipate [3] -
1163:7, 1163:8,
1181:4
anticipated [2] -
1181:8, 1365:8
anticipates [6] -
1168:16, 1169:2,
1179:2, 1185:13,
1185:22, 1213:6
anticipating [1] -
1161:15
anticipation [5] -
1193:20, 1358:3,
1360:12, 1370:8,
1370:15
anxious [1] - 1246:23
apologize [1] - 1174:4
apparent [1] - 1185:11
appeal [1] - 1160:19
appear [5] - 1169:16,
1202:14, 1213:24,
1308:13
APPEARANCES [2] -
1154:16, 1155:1
appeared [2] -
1213:17, 1214:5
appellate [1] -

1164:11
applicable [6] -
1277:22, 1312:4,
1312:9, 1315:11,
1315:13, 1317:14
application [8] -
1167:4, 1172:11,
1173:8, 1198:9,
1221:3, 1233:22,
1296:6
applications [3] -
1291:10, 1291:11,
1295:13
applied [6] - 1216:2,
1284:15, 1323:3,
1323:4, 1325:7,
1360:9
applies [3] - 1321:6,
1339:14, 1341:12
apply [10] - 1198:12,
1276:17, 1283:14,
1283:18, 1318:24,
1322:23, 1337:22,
1337:23, 1339:9,
1339:12
applying [1] - 1179:20
apportion [1] - 1300:2
apportionment [14] -
1299:22, 1310:17,
1311:8, 1320:8,
1320:12, 1320:13,
1321:11, 1321:17,
1322:6, 1322:19,
1323:4, 1326:15,
1329:4, 1337:22
appreciate [2] -
1163:21, 1167:7
approach [5] -
1157:10, 1186:7,
1197:16, 1197:17,
1250:17
appropriate [41] -
1176:21, 1177:15,
1182:23, 1198:14,
1236:1, 1236:2,
1247:1, 1252:4,
1265:17, 1271:3,
1274:5, 1276:21,
1276:24, 1278:1,
1278:17, 1279:19,
1284:2, 1294:14,
1298:13, 1299:12,
1311:9, 1311:10,
1314:4, 1321:22,
1322:7, 1322:21,
1323:17, 1329:18,
1337:8, 1337:10,
1337:19, 1337:23,
1338:3, 1338:8,
1338:11, 1349:3,

1349:6, 1352:19,
1353:2, 1353:4,
1353:11
appropriately [1] -
1230:4
April [3] - 1248:4,
1312:16, 1313:2
architecture [1] -
1204:5
area [8] - 1174:23,
1175:9, 1178:4,
1202:24, 1267:2,
1291:15, 1308:2,
1326:19
areas [1] - 1239:6
argue [1] - 1184:20
arguing [1] - 1161:20
argument [8] -
1184:20, 1233:10,
1233:11, 1234:12,
1244:12, 1293:12,
1361:1, 1361:12
arguments [2] -
1369:9, 1369:16
arisen [1] - 1259:19
ARSHT [1] - 1155:4
art [16] - 1169:20,
1169:24, 1170:2,
1179:16, 1179:19,
1181:19, 1183:11,
1184:9, 1185:2,
1206:8, 1223:14,
1223:20, 1227:13,
1227:19, 1228:1,
1359:24
Art+Com [17] -
1195:15, 1255:22,
1262:1, 1262:2,
1262:4, 1262:5,
1262:6, 1262:19,
1262:20, 1263:3,
1263:4, 1263:19,
1263:23, 1264:4,
1264:24, 1344:8,
1344:24
ART+COM [1] -
1154:3
ArtPlus.com [1] -
1255:6
ascertainable [1] -
1358:15
aspect [3] - 1183:9,
1291:18, 1361:11
aspects [6] - 1291:4,
1307:11, 1320:18,
1330:1, 1333:8,
1341:17
asserted [9] -
1182:10, 1271:9,
1276:7, 1276:13,

1300:12, 1300:24, 1357:14, 1370:6, 1370:11 **assess** [4] - 1271:22, 1277:14, 1333:6, 1336:23 **assessed** [1] - 1277:5 **assessing** [4] - 1297:12, 1315:20, 1333:5, 1336:11 **assessment** [6] - 1271:21, 1273:19, 1279:2, 1279:6, 1284:9, 1300:10 **assignment** [2] - 1270:24, 1271:1 **assist** [4] - 1188:2, 1188:12, 1189:12, 1267:5 **assistants** [1] - 1165:22 **associate** [1] - 1267:18 **associated** [15] - 1256:23, 1256:24, 1257:9, 1290:7, 1304:13, 1304:14, 1307:12, 1310:8, 1315:5, 1316:12, 1317:6, 1317:8, 1321:5, 1353:17, 1354:12 **association** [1] - 1257:12 **assume** [6] - 1220:20, 1253:24, 1271:15, 1271:22, 1279:22, 1341:7 **assuming** [1] - 1184:16 **assumption** [7] - 1271:17, 1275:24, 1276:3, 1296:14, 1331:12, 1331:14, 1354:4 **assumptions** [2] - 1271:19, 1342:12 **attached** [2] - 1223:15, 1282:21 **attempt** [5] - 1262:23, 1263:1, 1263:4, 1263:6, 1339:15 **attempting** [2] - 1196:8, 1339:20 **attend** [1] - 1167:8 **attendance** [1] - 1171:23 **attended** [1] - 1272:24 **attending** [2] - 1242:18, 1242:19	**attention** [2] - 1359:18, 1369:18 **attorney's** [1] - 1163:23 **attorneys** [3] - 1234:20, 1245:13, 1245:21 **attributing** [1] - 1320:18 **Audi** [11] - 1314:24, 1315:1, 1315:2, 1315:4, 1315:9, 1319:7, 1319:9, 1319:11, 1319:15, 1319:16, 1343:11 **August** [1] - 1280:9 **author** [1] - 1200:16 **authored** [1] - 1268:7 **authority** [1] - 1199:21 **available** [6] - 1227:15, 1271:2, 1272:3, 1305:12, 1313:21, 1340:22 **average** [1] - 1332:23 **avoid** [2] - 1163:5, 1165:7 **award** [1] - 1278:2 **aware** [13] - 1192:4, 1193:7, 1195:15, 1263:19, 1264:24, 1265:2, 1338:17, 1347:8, 1347:20, 1348:3, 1349:19, 1349:23, 1350:11 **awful** [2] - 1235:5, 1273:15 **B-R-E-T-T** [1] - 1265:24 **bachelors** [1] - 1267:11 **background** [1] - 1267:10 **Bailey** [4] - 1310:6, 1349:18, 1349:20, 1350:10 **Bailey's** [2] - 1349:13, 1349:16 **BAKER** [1] - 1154:21 **bar** [6] - 1186:9, 1250:19, 1291:24, 1292:1, 1293:24, 1308:12 **Barbara** [1] - 1200:16 **base** [6] - 1284:15, 1312:10, 1318:18, 1319:19, 1321:14, 1337:20 **based** [29] - 1168:24, 1169:8, 1172:3, 1174:23, 1175:16,	1178:22, 1179:18, 1223:19, 1224:13, 1227:18, 1232:6, 1249:7, 1299:23, 1310:1, 1326:19, 1334:23, 1337:6, 1337:17, 1338:6, 1353:8, 1353:13, 1353:15, 1357:24, 1358:3, 1358:12, 1359:6, 1359:24, 1360:3, 1361:2 **bases** [1] - 1359:16 **basic** [3] - 1271:20, 1276:2, 1330:24 **basis** [10] - 1169:6, 1169:13, 1171:8, 1235:10, 1235:14, 1241:12, 1292:19, 1293:5, 1293:11, 1338:9 **bate** [1] - 1219:18 **bates** [2] - 1220:11, 1259:5 **bay** [1] - 1267:2 **Beaumont** [1] - 1270:5 **became** [3] - 1255:24, 1258:8, 1296:6 **BEFORE** [1] - 1154:13 **begin** [4] - 1191:4, 1288:16, 1336:4, 1369:15 **beginning** [10] - 1172:15, 1264:7, 1275:1, 1296:13, 1298:6, 1302:20, 1312:15, 1316:17, 1335:9, 1360:8 **begins** [7] - 1274:18, 1280:17, 1313:1, 1333:21, 1334:9, 1335:4, 1368:11 **behalf** [2] - 1347:4, 1347:12 **behind** [1] - 1194:9 **belief** [1] - 1247:1 **bench** [2] - 1186:8, 1250:17 **beneath** [1] - 1264:4 **benefit** [4] - 1168:7, 1173:3, 1307:19, 1315:16 **benefits** [1] - 1202:22 **Bernard** [1] - 1171:16 **best** [3] - 1218:19, 1246:3, 1351:20 **better** [7] - 1156:10, 1178:5, 1197:14, 1232:14, 1232:17,	1256:22, 1364:1 **between** [44] - 1158:23, 1169:17, 1170:9, 1171:1, 1178:15, 1179:12, 1179:17, 1181:22, 1206:4, 1226:3, 1227:22, 1229:5, 1233:6, 1234:20, 1234:23, 1245:21, 1245:24, 1246:7, 1255:12, 1264:16, 1267:20, 1277:6, 1279:12, 1280:23, 1281:17, 1282:10, 1284:20, 1285:6, 1286:4, 1286:20, 1290:18, 1296:1, 1296:21, 1297:15, 1305:8, 1306:13, 1306:17, 1307:11, 1308:6, 1309:9, 1322:7, 1345:9, 1346:17, 1358:8 **beyond** [5] - 1195:11, 1196:2, 1300:12, 1300:24, 1352:20 **big** [4] - 1258:19, 1316:5, 1348:21, 1348:23 **billed** [3] - 1187:9, 1187:14, 1273:13 **billing** [1] - 1273:5 **binder** [9] - 1194:9, 1212:1, 1215:8, 1215:12, 1215:13, 1230:9, 1231:9, 1231:10, 1240:4 **binders** [4] - 1165:6, 1165:21, 1166:2, 1166:9 **Birch** [22] - 1234:6, 1234:17, 1234:24, 1235:4, 1235:10, 1236:4, 1236:7, 1245:9, 1245:12, 1246:6, 1253:17, 1272:21, 1305:10, 1305:17, 1306:10, 1308:1, 1308:9, 1315:3, 1316:13, 1317:16, 1333:19, 1349:4 **Birch's** [5] - 1235:1, 1235:14, 1235:18, 1253:13, 1310:5 **bit** [3] - 1214:5, 1242:4, 1369:4 **blow** [2] - 1350:2, 1350:16	**blue** [2] - 1302:16, 1302:18 **BLUMENFELD** [1] - 1155:4 **blurry** [4] - 1249:19, 1367:23, 1368:5, 1368:11 **board** [8] - 1161:5, 1161:7, 1161:9, 1256:13, 1256:16, 1256:18, 1286:10 **boards** [1] - 1160:19 **bodies** [1] - 1185:2 **book** [1] - 1191:9 **bookings** [3] - 1316:1, 1316:8, 1316:23 **borrow** [1] - 1364:2 **bottle** [1] - 1320:20 **bottom** [5] - 1178:17, 1209:19, 1228:3, 1238:24, 1298:21 **BOTTS** [1] - 1154:21 **box** [2] - 1298:21, 1312:9 **boxes** [9] - 1224:15, 1224:17, 1224:18, 1224:22, 1225:4, 1225:10, 1225:13, 1225:14, 1225:15 **break** [7] - 1259:13, 1259:16, 1260:14, 1325:24, 1354:20, 1355:3, 1355:24 **breath** [1] - 1161:19 **BRETT** [2] - 1155:8, 1266:2 **Brett** [3] - 1265:15, 1265:23, 1266:16 **BRIAN** [1] - 1154:18 **brief** [1] - 1260:17 **bring** [7] - 1260:21, 1261:6, 1364:5, 1364:13, 1364:16, 1365:24, 1366:20 **bringing** [1] - 1225:2 **broad** [1] - 1263:7 **broader** [1] - 1330:20 **browser** [1] - 1308:13 **browsers** [1] - 1191:24 **browsing** [1] - 1305:21 **buffet** [2] - 1332:9, 1332:18 **buffets** [1] - 1332:19 **bullet** [5] - 1313:13, 1313:14, 1314:1, 1346:12, 1346:19 **bullets** [1] - 1299:1 **bunch** [1] - 1224:10

burden [2] - 1186:17, 1186:18
business [1] - 1258:18
buy [3] - 1285:15, 1339:20, 1339:22
buying [4] - 1285:21, 1285:22, 1285:24, 1305:20
BY [21] - 1154:18, 1154:21, 1154:22, 1154:22, 1154:23, 1155:4, 1155:7, 1155:8, 1168:3, 1187:4, 1192:18, 1199:7, 1221:15, 1237:3, 1237:17, 1249:5, 1266:10, 1294:1, 1326:2, 1352:16, 1367:15
bytes [1] - 1195:10
C.A [1] - 1154:5
calculate [3] - 1223:7, 1223:9, 1278:19
calculated [3] - 1222:23, 1223:2, 1320:4
calculates [2] - 1177:1, 1222:18
calculation [9] - 1299:2, 1309:4, 1315:13, 1316:11, 1317:11, 1318:20, 1319:6, 1322:13, 1322:21
calculations [1] - 1270:8
California [4] - 1193:16, 1267:2, 1267:13, 1269:21
Canadian [1] - 1211:15
cannot [1] - 1161:23
capability [2] - 1202:6, 1301:5
capable [1] - 1200:1
capacity [2] - 1195:11, 1196:2
captioned [1] - 1372:12
care [1] - 1361:11
carefully [1] - 1211:5
carry [1] - 1362:19
cars [1] - 1269:3
case [58] - 1160:24, 1161:2, 1163:23, 1167:8, 1182:10, 1186:17, 1191:3, 1207:11, 1214:19, 1215:2, 1225:12,

1226:19, 1228:23, 1237:19, 1260:3, 1270:23, 1273:24, 1274:3, 1275:1, 1275:13, 1277:13, 1277:18, 1278:12, 1278:22, 1279:3, 1281:12, 1284:2, 1290:8, 1291:17, 1292:23, 1294:20, 1298:6, 1298:8, 1298:14, 1312:4, 1315:7, 1330:15, 1333:6, 1334:18, 1341:1, 1350:14, 1352:7, 1354:10, 1356:2, 1360:17, 1360:20, 1360:21, 1361:18, 1361:19, 1362:1, 1363:1, 1363:7, 1363:10, 1367:5, 1367:6, 1369:12, 1369:14, 1371:3
cases [14] - 1163:9, 1213:20, 1213:23, 1214:1, 1214:3, 1214:4, 1269:5, 1269:14, 1269:16, 1270:7, 1270:10, 1270:15, 1348:6, 1354:8
Castle [1] - 1372:2
Castleman [21] - 1173:13, 1174:4, 1187:6, 1187:21, 1187:24, 1247:9, 1247:19, 1247:22, 1328:7, 1329:15, 1329:17, 1357:15, 1361:24, 1362:23, 1363:2, 1363:16, 1367:9, 1367:12, 1367:16, 1368:18, 1368:22
Castleman's [6] - 1187:10, 1187:19, 1247:5, 1249:24, 1250:8, 1328:4
categories [7] - 1319:6, 1339:5, 1342:2, 1343:16, 1348:14, 1348:15, 1352:20
category [9] - 1304:8, 1318:17, 1339:6, 1341:23, 1342:11, 1342:17, 1342:18, 1343:6, 1343:12
Center [1] - 1193:17

centimeters [2] - 1226:13, 1227:6
centrally [3] - 1177:10, 1178:1, 1208:10
CEO's [1] - 1257:16
certain [8] - 1160:19, 1250:24, 1252:18, 1253:6, 1259:24, 1272:16, 1291:1, 1366:13
certainly [11] - 1226:10, 1287:21, 1304:1, 1306:20, 1325:4, 1338:5, 1339:13, 1345:9, 1345:12, 1348:21, 1349:16
certainty [1] - 1299:7
CERTIFICATE [1] - 1372:5
Certified [1] - 1372:8
certify [1] - 1372:9
challenges [5] - 1192:2, 1192:7, 1202:21, 1203:3, 1203:9
chance [1] - 1292:4
change [1] - 1175:22
changed [3] - 1159:19, 1253:15, 1314:7
changes [3] - 1182:21, 1253:14, 1365:12
changing [1] - 1183:5
chapter [2] - 1191:9, 1191:14
charge [6] - 1167:9, 1260:20, 1343:24, 1361:5, 1364:20, 1371:13
charged [3] - 1187:18, 1187:19, 1302:8
charges [1] - 1273:10
chart [4] - 1168:18, 1305:10, 1313:19, 1338:12
chat [1] - 1365:11
check [4] - 1167:10, 1238:8, 1297:2, 1324:5
Chief [1] - 1365:19
child [1] - 1240:16
choose [2] - 1309:12, 1340:11
choosing [3] - 1341:7, 1342:7, 1342:8
chose [10] - 1190:3, 1248:16, 1292:22

1303:12, 1308:11, 1308:17, 1339:10, 1343:7, 1349:8, 1352:10
Chrome [18] - 1308:3, 1308:7, 1308:13, 1308:17, 1308:21, 1308:23, 1308:24, 1309:13, 1309:14, 1310:8, 1311:6, 1314:17, 1318:19, 1318:21, 1336:16, 1343:5, 1343:8, 1353:4
Circuit [2] - 1260:3, 1292:18
circumstance [2] - 1334:18, 1340:17
circumstances [3] - 1343:16, 1343:18, 1354:7
cite [3] - 1236:18, 1237:4, 1241:19
cited [4] - 1179:15, 1212:17, 1236:14, 1358:23
cities [1] - 1270:4
citing [1] - 1237:9
Civil [1] - 1370:5
claim [38] - 1168:16, 1168:20, 1168:22, 1169:11, 1169:17, 1170:12, 1173:14, 1173:16, 1173:19, 1176:2, 1177:18, 1180:15, 1181:1, 1181:23, 1182:5, 1182:8, 1182:9, 1182:11, 1182:12, 1182:15, 1182:16, 1183:2, 1183:4, 1183:5, 1184:5, 1184:10, 1185:11, 1185:16, 1201:10, 1205:1, 1206:16, 1209:16, 1224:3, 1247:12, 1358:6
Claim [21] - 1174:9, 1174:13, 1174:16, 1175:24, 1176:4, 1176:6, 1176:8, 1177:7, 1177:19, 1178:12, 1178:23, 1179:2, 1179:5, 1179:10, 1180:1, 1180:3, 1180:4, 1180:11, 1222:9, 1241:6, 1357:17
claimed [1] - 1358:14
Claims [2] - 1177:21,

1360:9
claims [25] - 1169:2, 1170:10, 1171:4, 1179:13, 1179:24, 1180:24, 1181:6, 1181:7, 1181:13, 1181:24, 1182:5, 1185:8, 1185:14, 1185:23, 1204:19, 1206:5, 1213:6, 1271:9, 1276:7, 1276:13, 1311:23, 1357:15, 1359:2, 1370:6, 1370:11
clarification [3] - 1214:8, 1214:13, 1221:23
clarify [1] - 1238:11
clarity [2] - 1162:20, 1163:20
classes [2] - 1242:18, 1242:19
clean [1] - 1163:24
clear [21] - 1158:14, 1159:14, 1161:22, 1163:4, 1164:2, 1175:17, 1182:19, 1183:20, 1199:5, 1202:12, 1211:6, 1223:16, 1230:5, 1244:16, 1319:21, 1342:7, 1344:22, 1358:5, 1370:9, 1370:16
clearly [9] - 1219:9, 1226:13, 1227:21, 1228:13, 1269:7, 1293:15, 1301:10, 1303:3, 1343:11
CLERK [1] - 1265:21
clerk [1] - 1365:24
click [1] - 1342:14
clicked [1] - 1343:1
clicking [1] - 1342:21
close [8] - 1159:6, 1163:19, 1197:24, 1198:19, 1360:4, 1363:6, 1371:5
closed [1] - 1164:6
closely [1] - 1286:1
closing [3] - 1156:8, 1369:9, 1369:16
co [3] - 1198:6, 1201:18, 1202:1
co-located [2] - 1201:18, 1202:1
co-workers [1] - 1198:6
coarse [9] - 1229:10, 1229:19, 1230:1,

1230:3, 1231:22,
1232:21, 1249:10,
1249:13, 1249:14
coarse-to-fine [8] -
1229:10, 1230:1,
1230:3, 1231:22,
1232:21, 1249:10,
1249:13, 1249:14
code [36] - 1189:19,
1199:16, 1199:21,
1199:24, 1216:16,
1217:2, 1217:6,
1217:9, 1217:10,
1220:1, 1236:6,
1236:11, 1236:15,
1238:4, 1238:15,
1238:20, 1238:23,
1239:3, 1239:6,
1239:10, 1240:1,
1240:7, 1240:23,
1241:15, 1241:18,
1246:12, 1247:2,
1247:10, 1247:16,
1248:13, 1248:21,
1250:3, 1250:8,
1250:21, 1253:4
cofounded [1] -
1267:21
collection [1] -
1266:24
color [3] - 1208:13,
1208:18, 1208:23
column [1] - 1212:24
combination [8] -
1184:2, 1184:6,
1185:1, 1185:9,
1357:22, 1359:6,
1359:10, 1359:11
combined [3] -
1183:12, 1184:13,
1306:4
combining [1] -
1185:1
coming [4] - 1165:1,
1319:15, 1324:4,
1353:24
comma [1] - 1211:14
comments [5] -
1239:17, 1239:21,
1240:14, 1240:19,
1247:16
commercial [5] -
1280:22, 1281:7,
1282:14, 1295:5,
1295:8
commercialize [3] -
1262:12, 1262:18,
1263:12
communicate [1] -
1262:2

communicating [1] -
1194:19
communication [10] -
1282:16, 1282:19,
1283:5, 1284:19,
1285:6, 1285:8,
1287:22, 1344:14,
1344:23, 1346:8
communications [6] -
1282:10, 1286:3,
1286:17, 1286:20,
1344:24, 1345:8
companies [13] -
1255:21, 1267:24,
1268:1, 1268:19,
1268:20, 1277:7,
1287:17, 1287:18,
1287:21, 1289:18,
1295:6, 1295:10
company [16] -
1254:24, 1255:16,
1255:18, 1258:19,
1266:18, 1266:23,
1268:22, 1277:8,
1277:9, 1277:10,
1285:23, 1287:9,
1295:7, 1295:11,
1297:16, 1354:8
comparability [3] -
1259:24, 1290:24,
1291:3
comparable [16] -
1260:4, 1289:11,
1290:6, 1291:6,
1292:12, 1292:13,
1292:17, 1293:21,
1294:21, 1326:11,
1327:10, 1328:8,
1328:17, 1347:16,
1348:5, 1348:8
comparatively [1] -
1192:9
compare [5] -
1170:12, 1170:15,
1190:2, 1297:7,
1312:17
compared [5] -
1204:24, 1305:14,
1306:20, 1318:14,
1320:19
comparing [2] -
1170:24, 1181:21
comparison [1] -
1306:5
compensation [5] -
1273:23, 1275:7,
1275:8, 1275:10,
1276:21
Competition [3] -
1266:19, 1266:21,

1267:22
competitive [6] -
1277:17, 1277:20,
1281:8, 1281:16,
1282:1, 1324:18
competitor [1] -
1277:6
competitors [1] -
1281:13
complete [5] -
1186:13, 1221:14,
1226:11, 1226:21,
1244:22
completed [2] -
1237:21, 1244:10
completing [1] -
1244:5
complex [3] - 1219:7,
1241:14, 1246:22
complicated [1] -
1334:6
complications [2] -
1312:22, 1335:23
components [1] -
1204:1
composite [1] -
1180:19
comprising [1] -
1197:3
compromise [6] -
1159:2, 1286:11,
1286:14, 1322:7,
1322:17, 1324:19
computer [7] -
1165:12, 1201:14,
1205:24, 1217:16,
1217:19, 1219:5,
1269:7
concept [1] - 1207:16
concern [1] - 1164:18
concerned [5] -
1159:24, 1177:9,
1177:23, 1214:23,
1360:12
concerns [3] - 1157:8,
1166:15, 1204:5
conclude [6] -
1185:18, 1226:14,
1241:17, 1298:12,
1310:2, 1316:20
concluded [5] -
1178:24, 1179:3,
1181:6, 1298:17,
1323:16
concluding [1] -
1291:6
conclusion [21] -
1168:15, 1168:20,
1168:24, 1169:8,
1169:14, 1170:4,

1170:23, 1179:8,
1181:2, 1181:10,
1184:1, 1185:6,
1191:18, 1278:1,
1278:5, 1292:11,
1299:11, 1311:11,
1324:4, 1354:1
conclusions [3] -
1191:13, 1235:16,
1248:23
conditions [1] -
1295:19
conduct [1] - 1320:11
conference [15] -
1167:9, 1217:14,
1219:4, 1260:20,
1361:5, 1364:8,
1364:14, 1364:16,
1364:18, 1364:20,
1365:5, 1365:7,
1365:21, 1366:1,
1371:13
conferences [2] -
1217:20, 1268:12
confidential [3] -
1242:9, 1242:11,
1309:8
confidentiality [2] -
1299:2, 1366:5
confuse [1] - 1158:9
connected [1] -
1219:10
connection [6] -
1184:21, 1228:24,
1234:12, 1240:11,
1248:3, 1252:21
conoid [1] - 1307:10
Conrad [1] - 1167:5
consequences [1] -
1182:17
consider [25] -
1169:24, 1182:11,
1238:19, 1241:13,
1272:1, 1282:9,
1286:14, 1290:12,
1290:19, 1291:5,
1294:6, 1297:11,
1299:24, 1310:14,
1310:22, 1312:12,
1320:14, 1321:11,
1328:22, 1334:19,
1336:13, 1346:19,
1352:18, 1353:10,
1354:3
consideration [23] -
1281:10, 1281:15,
1283:20, 1284:18,
1284:21, 1296:12,
1310:17, 1311:4,
1311:24, 1312:3,

1314:5, 1317:1,
1317:13, 1319:7,
1319:10, 1322:3,
1322:17, 1323:10,
1332:12, 1332:14,
1340:6, 1344:2,
1362:21
considerations [11] -
1159:14, 1159:17,
1159:21, 1160:6,
1186:15, 1286:21,
1288:5, 1324:3,
1324:8, 1325:5,
1335:24
considered [74] -
1199:2, 1199:12,
1211:4, 1212:20,
1272:2, 1272:5,
1272:7, 1272:11,
1272:12, 1272:14,
1278:15, 1278:16,
1278:21, 1278:23,
1280:15, 1280:20,
1280:22, 1281:3,
1282:16, 1284:20,
1285:7, 1288:2,
1289:9, 1289:14,
1289:18, 1290:2,
1290:14, 1290:16,
1291:1, 1294:8,
1294:17, 1294:22,
1295:5, 1295:18,
1296:3, 1297:14,
1298:16, 1298:17,
1299:20, 1300:6,
1300:9, 1301:13,
1301:23, 1302:2,
1305:9, 1306:8,
1307:8, 1309:2,
1313:4, 1313:5,
1313:10, 1313:23,
1314:17, 1314:22,
1317:3, 1317:23,
1319:8, 1321:1,
1321:13, 1321:23,
1323:6, 1323:10,
1324:5, 1324:9,
1324:14, 1324:17,
1328:10, 1328:11,
1333:16, 1333:18,
1345:12, 1349:4,
1350:23, 1351:2
considering [3] -
1233:19, 1328:20,
1354:10
consist [2] - 1201:18,
1363:1
consistent [10] -
1157:12, 1297:9,
1310:4, 1316:13,

1316:18, 1317:16, 1317:18, 1324:8, 1328:9, 1365:2
construction [2] - 1172:9, 1201:11
consultation [2] - 1245:12, 1245:17
consultations [1] - 1236:17
consumer [2] - 1308:9, 1333:23
consumers [2] - 1295:1, 1303:1
containing [2] - 1178:18, 1228:5
contemplated [1] - 1198:7
contemplating [1] - 1364:17
content [3] - 1292:9, 1358:10, 1358:23
contention [2] - 1159:10, 1159:11
contested [1] - 1185:23
context [11] - 1196:7, 1209:8, 1215:15, 1232:14, 1232:18, 1235:24, 1236:3, 1241:21, 1241:24, 1279:11, 1351:6
continue [4] - 1167:24, 1261:14, 1313:15, 1313:16
continued [2] - 1303:9, 1305:23
CONTINUED [1] - 1155:1
continuing [1] - 1312:16
continuous [3] - 1178:16, 1226:4, 1226:15
contrast [1] - 1233:6
contrasted [1] - 1229:20
contributes [1] - 1301:9
contribution [2] - 1299:23, 1320:17
contributions [5] - 1300:1, 1321:2, 1324:14, 1326:16, 1329:19
control [1] - 1182:19
conversation [7] - 1272:18, 1289:19, 1290:3, 1292:20, 1320:15, 1345:6, 1349:18

conversations [6] - 1272:19, 1307:17, 1327:13, 1344:20, 1345:5, 1345:10
convert [1] - 1322:24
convincing [4] - 1358:5, 1370:9, 1370:10, 1370:16
cookie [3] - 1353:7, 1353:12, 1353:15
coordinate [5] - 1183:6, 1183:7, 1183:11, 1183:21, 1183:23
coordinates [1] - 1183:6
copy [4] - 1196:14, 1200:24, 1211:7, 1215:7
copyrights [1] - 1291:14
corner [1] - 1283:3
Correct [4] - 1168:13, 1224:4, 1230:14, 1339:3
correct [128] - 1156:21, 1161:6, 1168:12, 1174:7, 1187:22, 1188:24, 1189:8, 1190:5, 1190:8, 1190:20, 1191:16, 1192:4, 1192:10, 1193:17, 1194:1, 1194:5, 1195:7, 1196:24, 1197:1, 1197:5, 1197:9, 1198:3, 1198:20, 1199:9, 1199:13, 1199:17, 1199:21, 1200:17, 1202:24, 1203:3, 1203:6, 1205:18, 1205:19, 1208:19, 1209:6, 1209:16, 1210:20, 1212:17, 1213:3, 1213:9, 1213:23, 1217:12, 1217:16, 1217:17, 1220:8, 1220:20, 1220:23, 1222:10, 1223:3, 1224:3, 1224:11, 1228:19, 1229:7, 1230:13, 1230:23, 1230:24, 1231:3, 1231:19, 1231:22, 1232:1, 1233:12, 1234:18, 1235:2, 1235:7, 1235:23, 1236:11, 1236:15, 1236:20,

1239:18, 1240:17, 1240:20, 1242:1, 1243:12, 1246:21, 1249:24, 1250:6, 1257:22, 1279:9, 1285:4, 1326:8, 1326:12, 1326:18, 1327:20, 1327:24, 1328:2, 1329:2, 1329:5, 1329:6, 1329:15, 1329:16, 1329:21, 1330:3, 1330:4, 1330:19, 1331:4, 1331:5, 1331:21, 1334:13, 1335:19, 1337:3, 1337:8, 1337:9, 1338:10, 1339:2, 1339:3, 1339:21, 1340:4, 1341:13, 1341:24, 1342:1, 1343:6, 1343:8, 1343:13, 1343:19, 1343:22, 1345:11, 1345:24, 1346:6, 1346:10, 1348:11, 1348:15, 1348:17, 1349:1, 1349:9, 1349:10, 1352:11, 1352:12, 1366:18
correction [1] - 1339:23
correctly [4] - 1205:11, 1209:23, 1229:11, 1344:17
corresponds [1] - 1230:17
cost [13] - 1309:2, 1309:17, 1310:8, 1311:5, 1314:16, 1314:18, 1318:20, 1319:1, 1319:2, 1332:15, 1336:15, 1343:9, 1353:5
costs [2] - 1319:24, 1320:2
Counsel [2] - 1154:24, 1155:9
counsel [14] - 1160:15, 1162:13, 1163:18, 1164:7, 1164:22, 1165:20, 1166:14, 1186:7, 1250:17, 1252:3, 1253:19, 1260:24, 1351:8, 1353:6
countered [1] - 1329:20
country [2] - 1267:1, 1269:19

County [1] - 1372:2
couple [9] - 1156:2, 1192:15, 1201:5, 1202:4, 1240:23, 1260:15, 1269:6, 1304:24, 1333:24
course [14] - 1177:23, 1178:6, 1180:8, 1183:22, 1237:20, 1240:20, 1241:2, 1241:5, 1241:11, 1242:22, 1247:8, 1252:22, 1315:10, 1357:20
court [2] - 1171:15, 1311:23
COURT [108] - 1154:1, 1156:1, 1158:18, 1159:9, 1159:16, 1160:4, 1160:9, 1160:12, 1161:3, 1161:8, 1161:13, 1161:21, 1162:2, 1162:17, 1163:13, 1164:3, 1164:17, 1165:13, 1166:7, 1166:12, 1166:23, 1167:10, 1167:12, 1167:14, 1167:20, 1167:23, 1186:7, 1186:10, 1186:19, 1187:2, 1188:10, 1188:16, 1188:19, 1192:16, 1199:4, 1221:13, 1236:24, 1237:8, 1237:12, 1250:12, 1250:15, 1250:20, 1251:8, 1251:12, 1251:20, 1252:1, 1252:2, 1253:3, 1253:19, 1253:23, 1254:3, 1254:13, 1254:19, 1259:11, 1259:15, 1260:7, 1260:14, 1260:18, 1261:5, 1261:9, 1261:12, 1265:10, 1265:20, 1266:8, 1290:1, 1291:23, 1292:6, 1292:23, 1293:9, 1293:17, 1293:22, 1325:17, 1325:22, 1354:18, 1355:5, 1355:15, 1355:19, 1355:23, 1356:7, 1356:17, 1356:21, 1357:1, 1360:10, 1360:19, 1361:3, 1361:10, 1362:3,

1362:11, 1363:8, 1363:12, 1363:24, 1364:15, 1365:6, 1365:14, 1365:19, 1366:3, 1366:9, 1366:18, 1366:23, 1367:4, 1367:10, 1368:17, 1369:2, 1369:20, 1370:2, 1370:23, 1371:7, 1371:10
Court [14] - 1154:14, 1157:22, 1161:16, 1161:17, 1164:13, 1168:8, 1169:1, 1169:9, 1170:5, 1269:16, 1269:18, 1270:10, 1335:11, 1371:15
Court's [2] - 1201:10, 1359:18
courthouses [1] - 1269:23
courtroom [8] - 1162:23, 1167:21, 1247:20, 1249:23, 1261:10, 1356:5, 1365:23, 1366:21
Courtroom [1] - 1154:10
courtrooms [1] - 1270:3
cover [5] - 1202:15, 1212:8, 1212:10, 1295:16, 1298:9
coverage [1] - 1291:8
covered [4] - 1291:10, 1291:12, 1296:6, 1332:5
covers [1] - 1274:17
coworkers [2] - 1203:11, 1204:15
create [1] - 1216:10
created [1] - 1357:24
creating [1] - 1215:4
credible [1] - 1160:21
criteria [5] - 1223:22, 1227:16, 1228:11, 1228:19, 1228:20
criterion [1] - 1232:8
critical [2] - 1217:4, 1238:20
CROSS [1] - 1187:3
cross [4] - 1160:16, 1292:21, 1357:19, 1358:7
CROSS-EXAMINATION [1] - 1187:3
cross-examination [3]

- 1160:16, 1292:21,
1357:19
culling [1] - 1367:24
current [3] - 1195:11,
1196:2, 1255:5
customer [5] -
1308:16, 1308:21,
1309:10, 1333:20,
1343:1
customers [8] -
1258:20, 1258:23,
1263:13, 1302:9,
1302:11, 1303:12,
1304:9, 1304:15
cut [2] - 1285:18,
1309:20
Dakota [1] - 1201:22
Dale [3] - 1372:7,
1372:19, 1372:20
damage [2] - 1273:22,
1313:1
damages [48] -
1265:16, 1268:3,
1268:9, 1268:11,
1268:14, 1270:10,
1271:3, 1271:18,
1271:21, 1271:22,
1271:23, 1272:15,
1272:17, 1273:20,
1274:5, 1274:17,
1274:19, 1274:24,
1275:1, 1275:4,
1275:5, 1275:10,
1276:3, 1276:8,
1276:10, 1276:17,
1276:18, 1276:20,
1277:6, 1278:1,
1278:6, 1280:16,
1288:16, 1295:17,
1307:10, 1311:14,
1311:24, 1312:14,
1312:23, 1330:21,
1333:5, 1334:20,
1335:4, 1335:23,
1336:5, 1336:11,
1336:13
DARIN [1] - 1155:7
data [41] - 1173:20,
1174:10, 1174:11,
1175:6, 1176:19,
1177:2, 1177:10,
1177:11, 1177:15,
1178:6, 1192:8,
1196:1, 1197:4,
1197:7, 1197:18,
1205:16, 1206:20,
1206:22, 1207:15,
1208:10, 1208:19,
1208:22, 1208:24,
1209:3, 1218:10,

1219:2, 1222:18,
1222:23, 1223:2,
1223:10, 1224:21,
1226:16, 1229:20,
1240:15, 1240:16,
1240:20, 1252:15,
1291:15, 1296:9,
1300:18, 1301:10
database [17] -
1174:17, 1174:22,
1175:14, 1178:18,
1182:22, 1201:16,
1202:1, 1205:9,
1206:23, 1210:12,
1211:8, 1218:8,
1218:18, 1219:10,
1220:3, 1227:15,
1228:4
databases [3] -
1175:1, 1202:5,
1220:18
date [15] - 1157:18,
1157:22, 1158:3,
1172:10, 1217:4,
1264:7, 1274:13,
1280:7, 1280:10,
1280:12, 1280:13,
1312:18, 1312:20,
1335:13, 1335:20
dates [3] - 1175:5,
1183:23, 1280:5
daughter [2] - 1258:9,
1258:18
days [1] - 1336:6
DC [1] - 1311:23
DDX [1] - 1282:23
DE [2] - 1195:6,
1195:7
deal [2] - 1198:14,
1335:11
dealing [2] - 1195:19,
1290:6
dealt [1] - 1362:20
dear [1] - 1360:6
decades [1] - 1183:24
December [6] -
1172:11, 1202:20,
1203:5, 1203:13,
1204:10, 1288:14
decide [2] - 1276:21,
1342:14
decided [3] - 1198:8,
1212:21, 1276:23
decides [4] - 1276:5,
1276:7, 1276:12,
1337:5
decision [4] -
1338:14, 1338:21,
1338:24, 1339:1
declined [1] - 1198:12

declining [2] -
1304:22, 1323:13
default [3] - 1241:1,
1241:8, 1357:19
Defendant [5] -
1154:7, 1255:1,
1270:18, 1270:21,
1357:11
defendant [3] -
1265:14, 1281:18,
1367:3
Defendant's [7] -
1166:2, 1196:10,
1201:2, 1205:2,
1206:11, 1235:6,
1239:12
Defendants [1] -
1155:9
defendants [3] -
1265:7, 1355:6,
1361:18
defense [4] - 1285:12,
1358:3, 1358:12,
1359:6
defenses [3] - 1359:4,
1359:19, 1359:21
define [5] - 1240:20,
1241:2, 1241:5,
1241:11, 1357:20
defined [4] - 1177:24,
1178:7, 1180:9,
1223:14
defining [1] - 1176:9
definitely [1] -
1296:23
definition [2] -
1169:24, 1259:2
DELAWARE [1] -
1154:2
Delaware [2] -
1154:12, 1372:1
delays [1] - 1206:22
deliberations [2] -
1164:21, 1369:15
deliver [2] - 1193:19,
1193:21
demands [2] -
1194:24, 1195:23
demonstrate [1] -
1306:12
demonstrated [1] -
1204:17
demonstrating [1] -
1184:24
demonstrations [1] -
1203:15
demonstrative [4] -
1157:5, 1239:12,
1240:3, 1240:6
demonstratives [4]

1156:8, 1156:9,
1156:14, 1157:9
denied [3] - 1361:14,
1370:24, 1371:8
dependent [8] -
1169:2, 1171:4,
1179:23, 1180:14,
1180:24, 1181:13,
1182:5, 1183:1
deponent [1] - 1266:3
deposition [12] -
1171:19, 1215:8,
1216:14, 1216:18,
1261:15, 1261:16,
1272:6, 1341:15,
1347:3, 1347:11,
1349:14, 1349:17
depositions [1] -
1273:18
deputy [1] - 1365:24
descend [1] - 1228:6
descending [1] -
1180:9
describe [7] -
1173:18, 1188:1,
1229:9, 1229:18,
1235:21, 1267:9,
1270:23
described [7] -
1165:22, 1249:15,
1253:16, 1253:17,
1269:6, 1279:20,
1312:14
describes [7] -
1176:20, 1178:12,
1178:14, 1180:7,
1218:1, 1219:1,
1230:4
describing [2] -
1219:3, 1229:19
description [1] -
1206:5
desired [5] - 1224:14,
1226:9, 1226:22,
1228:10, 1228:18
desktop [1] - 1305:13
detail [10] - 1178:15,
1178:19, 1182:23,
1189:22, 1222:22,
1226:4, 1227:14,
1228:6, 1241:14,
1247:2
detailed [4] - 1248:13,
1248:14, 1248:20,
1249:2
determination [5] -
1271:16, 1311:7,
1312:21, 1332:13,
1345:18
determine [13] -

1203:9, 1204:13,
1278:16, 1279:19,
1310:15, 1312:6,
1312:8, 1315:8,
1321:21, 1322:23,
1323:7, 1330:18,
1330:21
determined [4] -
1275:8, 1321:16,
1322:2, 1328:16
determines [1] -
1276:16
determining [6] -
1206:1, 1223:2,
1300:2, 1300:3,
1310:19, 1331:1
Detlef [1] - 1254:21
develop [2] - 1257:22,
1257:24
developed [5] -
1188:23, 1198:15,
1204:2, 1248:15,
1248:17
developers [8] -
1190:11, 1192:1,
1192:4, 1193:6,
1196:8, 1196:23,
1208:13, 1237:5
developing [1] -
1258:3
development [3] -
1193:3, 1218:2,
1258:6
developments [2] -
1217:16, 1217:19
device [4] - 1195:12,
1195:20, 1196:3,
1252:19
diagram [3] - 1224:24,
1235:11, 1360:5
difference [2] -
1173:6, 1296:4
differences [18] -
1169:16, 1169:17,
1169:21, 1170:8,
1170:9, 1170:12,
1170:24, 1179:12,
1181:15, 1181:17,
1181:21, 1206:4,
1206:7, 1227:22,
1228:2, 1255:12,
1255:15, 1296:1
different [31] -
1160:24, 1161:1,
1178:15, 1179:17,
1180:19, 1211:9,
1226:4, 1232:7,
1244:7, 1246:15,
1249:10, 1255:20,
1255:21, 1267:24,

1269:18, 1270:3,
1294:9, 1294:24,
1296:20, 1299:4,
1300:10, 1312:23,
1316:16, 1317:17,
1320:18, 1324:12,
1346:12, 1354:6
difficult [2] - 1241:21,
1299:3
difficulties [2] -
1158:1, 1324:11
digital [4] - 1194:1,
1194:19, 1195:7,
1197:12
direct [19] - 1188:22,
1198:23, 1199:9,
1204:21, 1209:11,
1211:21, 1213:3,
1217:11, 1218:1,
1220:19, 1221:24,
1225:20, 1229:2,
1234:16, 1236:23,
1237:6, 1239:14,
1240:9, 1242:23
DIRECT [1] - 1266:9
directed [5] - 1357:13,
1358:2, 1358:11,
1359:3, 1359:15
direction [6] -
1176:15, 1176:17,
1177:1, 1211:9,
1222:15, 1223:5
directions [1] - 1301:6
directly [2] - 1264:4,
1329:12
director [8] - 1254:23,
1255:11, 1255:13,
1255:19, 1255:20,
1256:19, 1257:7,
1257:10
directors [7] - 1256:6,
1256:11, 1256:14,
1256:17, 1256:18,
1257:15, 1266:22
disagree [2] -
1277:24, 1337:18
disagrees [2] -
1337:13, 1337:14
disclose [8] - 1173:16,
1174:12, 1176:6,
1177:7, 1177:21,
1179:4, 1180:13,
1211:3
disclosed [2] -
1170:17, 1184:11
discloses [5] -
1168:21, 1175:24,
1180:2, 1182:15,
1183:3
disclosure [6] -

1176:23, 1180:12,
1181:22, 1184:14,
1205:1, 1221:1
disclosures [7] -
1170:14, 1170:15,
1171:2, 1179:9,
1181:3, 1181:11,
1184:15
discontinued [1] -
1324:13
discounted [1] -
1335:1
discounting [4] -
1323:6, 1334:24,
1335:14, 1345:20
discover [1] - 1305:5
discovered [1] -
1243:15
discuss [8] - 1260:22,
1262:3, 1350:10,
1356:2, 1361:4,
1364:7, 1369:12,
1369:14
discussed [4] -
1169:7, 1289:22,
1315:1, 1352:22
discussing [5] -
1264:15, 1264:16,
1293:24, 1341:16,
1351:14
discussion [10] -
1157:18, 1186:9,
1188:18, 1250:19,
1286:10, 1292:1,
1307:24, 1329:4,
1341:3, 1364:19
discussions [4] -
1254:8, 1283:8,
1299:10, 1299:16
displace [1] - 1171:10
display [2] - 1180:21,
1269:1
displayed [2] -
1168:11, 1253:1
displays [2] - 1269:3,
1269:8
disposed [2] - 1164:8,
1164:16
dispute [2] - 1360:11,
1361:6
disputed [1] - 1361:13
disseminate [1] -
1216:10
disseminating [1] -
1215:4
distance [1] - 1176:10
distinction [3] -
1229:5, 1293:4,
1306:13
distributed [14] -

1171:13, 1174:10,
1174:17, 1174:22,
1175:1, 1175:14,
1197:19, 1204:6,
1218:7, 1218:18,
1219:2, 1219:10,
1220:3, 1220:17
distribution [2] -
1172:13, 1319:15
district [2] - 1269:23,
1270:3
DISTRICT [2] - 1154:1,
1154:2
District [6] - 1154:14,
1269:16, 1269:18,
1269:21, 1270:2,
1270:10
districts [2] - 1269:18,
1269:20
divide [1] - 1178:20
divided [1] - 1178:5
dividing [6] - 1177:24,
1225:14, 1226:8,
1227:10, 1228:10,
1228:13
division [2] - 1228:19,
1233:18
Doctor [55] - 1174:1,
1174:4, 1174:8,
1176:22, 1198:5,
1198:16, 1212:10,
1214:14, 1215:2,
1241:17, 1242:10,
1253:24, 1254:6,
1259:21, 1259:22,
1272:19, 1289:19,
1289:20, 1290:3,
1290:4, 1290:5,
1290:22, 1292:11,
1292:22, 1293:2,
1294:21, 1300:6,
1300:9, 1300:22,
1320:14, 1321:1,
1321:11, 1322:14,
1322:15, 1326:13,
1326:23, 1326:24,
1327:8, 1327:21,
1328:3, 1328:6,
1328:11, 1328:21,
1329:5, 1329:15,
1329:17, 1329:21,
1329:23, 1330:5,
1357:18, 1357:22,
1359:21, 1360:1,
1360:7, 1368:22
document [28] -
1171:11, 1191:20,
1202:7, 1202:15,
1203:18, 1205:3,
1221:19, 1221:21,

1234:3, 1261:23,
1264:7, 1264:9,
1265:3, 1282:22,
1283:1, 1286:7,
1309:8, 1316:3,
1332:8, 1344:18,
1345:14, 1345:15,
1350:3, 1350:7,
1350:10, 1350:16,
1350:20
documents [23] -
1156:16, 1162:21,
1170:17, 1248:7,
1248:14, 1248:21,
1272:8, 1272:12,
1273:19, 1287:17,
1297:21, 1306:7,
1307:16, 1307:23,
1315:19, 1333:12,
1338:17, 1345:8,
1352:24, 1358:20,
1358:21, 1358:23
dollar [1] - 1158:24
dollars [4] - 1287:1,
1287:3, 1287:4,
1325:10
done [15] - 1164:6,
1174:2, 1193:7,
1202:13, 1204:12,
1205:16, 1206:14,
1213:19, 1223:24,
1231:12, 1233:24,
1267:16, 1268:5,
1347:11, 1357:21
dormant [2] - 1258:13,
1258:14
Dow [1] - 1268:22
down [9] - 1178:19,
1180:9, 1226:12,
1228:6, 1240:22,
1259:15, 1288:10,
1351:13, 1367:24
download [8] -
1308:10, 1308:11,
1308:22, 1308:23,
1309:13, 1318:24,
1343:5, 1343:7
downloaded [3] -
1304:1, 1304:4,
1308:16
downloads [3] -
1309:11, 1309:14,
1318:23
dozen [1] - 1165:16
dozens [1] - 1248:10
Dr [43] - 1160:17,
1162:19, 1163:1,
1167:18, 1167:24,
1168:4, 1173:13,
1183:19, 1186:3,

1186:11, 1187:5,
1187:6, 1187:10,
1187:19, 1187:21,
1187:24, 1188:21,
1231:11, 1247:5,
1247:9, 1247:19,
1247:22, 1249:6,
1249:24, 1250:8,
1260:11, 1260:12,
1261:2, 1347:21,
1348:4, 1361:21,
1361:24, 1362:16,
1362:20, 1362:23,
1363:2, 1363:16,
1363:17, 1363:18,
1367:8, 1367:12,
1367:16, 1368:18
dramatically [1] -
1307:4
draw [1] - 1235:15
drawing [3] - 1218:10,
1229:4, 1233:5
drawn [4] - 1220:17,
1221:17, 1224:24,
1234:10
drive [1] - 1218:11
driver [1] - 1306:21
drives [1] - 1310:10
driving [2] - 1301:6,
1307:1
DTX [29] - 1170:21,
1171:10, 1173:1,
1173:16, 1183:17,
1184:3, 1282:24,
1283:3, 1286:7,
1306:8, 1315:20,
1316:5, 1355:7,
1355:8, 1355:9,
1355:10, 1355:11
DTX-0214 [1] - 1319:4
DTX-1001A [3] -
1174:12, 1177:21,
1179:1
DTX-1011 [1] - 1318:9
DTX-1040 [1] -
1297:22
DTX-1055 [1] -
1297:23
DTX-1061 [2] -
1318:10, 1318:15
DTX-1062 [1] -
1318:16
DTX-1113 [1] -
1318:10
DTX-1132 [1] -
1318:10
DTX-1139 [1] - 1319:4
DTX-1141 [1] - 1319:3
DTX-1144 [1] -
1319:13

DTX-1145 [1] - 1319:14
DTX-1183 [1] - 1254:10
DTX-1184 [1] - 1254:9
DTX-1187 [1] - 1254:10
due [2] - 1259:20, 1271:4
duly [1] - 1266:4
duplication [1] - 1165:7
during [27] - 1162:18, 1164:21, 1188:21, 1198:2, 1198:23, 1199:9, 1200:7, 1204:21, 1207:2, 1209:11, 1211:20, 1217:10, 1218:1, 1220:18, 1221:24, 1234:16, 1237:19, 1239:14, 1240:9, 1242:22, 1247:8, 1262:1, 1299:11, 1329:7, 1347:5, 1348:10, 1351:15
DYK [1] - 1154:13
e-mail [4] - 1259:8, 1261:18, 1264:12, 1286:8
e-mailed [1] - 1157:2
earliest [2] - 1253:18, 1305:11
early [8] - 1175:11, 1203:12, 1250:21, 1253:4, 1282:4, 1302:22, 1338:17, 1345:4
earn [1] - 1313:9
earned [2] - 1315:4, 1333:7
earth [5] - 1194:1, 1194:19, 1195:7, 1197:13, 1223:9
Earth [142] - 1158:2, 1191:15, 1191:24, 1229:7, 1229:22, 1229:24, 1230:23, 1231:1, 1232:21, 1233:6, 1233:8, 1233:15, 1235:21, 1244:13, 1244:20, 1245:1, 1245:3, 1245:23, 1247:12, 1249:8, 1249:19, 1250:22, 1251:13, 1251:15, 1251:21, 1252:5, 1252:17, 1253:5, 1253:11, 1253:12, 1253:18,

1271:6, 1274:14, 1275:17, 1275:20, 1280:11, 1294:20, 1294:23, 1300:2, 1300:8, 1300:11, 1300:15, 1300:16, 1300:23, 1301:7, 1301:11, 1301:17, 1302:1, 1303:5, 1304:12, 1304:15, 1305:6, 1305:8, 1305:14, 1305:15, 1305:18, 1305:19, 1306:2, 1306:4, 1306:6, 1306:13, 1306:19, 1306:24, 1307:2, 1307:5, 1307:19, 1308:6, 1308:10, 1308:17, 1310:2, 1311:5, 1313:4, 1313:7, 1313:11, 1313:20, 1313:22, 1314:3, 1314:6, 1314:11, 1315:2, 1315:6, 1315:13, 1315:18, 1316:12, 1317:5, 1317:8, 1318:14, 1318:15, 1318:23, 1319:10, 1320:1, 1320:2, 1320:5, 1320:17, 1320:19, 1321:3, 1321:5, 1323:14, 1324:11, 1324:13, 1324:15, 1326:16, 1329:19, 1333:15, 1333:21, 1333:24, 1336:8, 1338:9, 1338:14, 1338:18, 1338:21, 1339:2, 1339:7, 1339:10, 1339:14, 1339:16, 1342:8, 1342:13, 1342:19, 1342:20, 1342:24, 1343:4, 1343:11, 1343:14, 1345:8, 1348:2, 1349:7, 1349:12, 1350:16, 1350:17, 1350:20, 1350:24, 1352:21, 1353:17, 1362:7, 1362:17, 1366:9, 1366:15, 1367:17, 1367:19
EarthViewer [1] - 1253:13
easier [1] - 1166:20
easiest [2] - 1165:24, 1253:9
easily [1] - 1

Eastern [1] - 1270:2
eat [3] - 1332:10, 1332:19, 1332:23
economic [8] - 1265:16, 1271:12, 1272:17, 1278:13, 1279:4, 1279:10, 1291:1, 1291:4
economically [2] - 1291:6, 1292:13
Economics [3] - 1266:19, 1266:21, 1267:22
economics [2] - 1267:12, 1267:15
economist [2] - 1266:16, 1271:11
EDC [2] - 1201:18, 1201:21
edited [1] - 1234:21
educational [1] - 1267:9
effect [2] - 1190:14, 1299:11
effort [1] - 1245:19
efforts [2] - 1262:12, 1262:17
eight [3] - 1214:22, 1214:23, 1246:15
eighty [1] - 1189:18
either [11] - 1156:3, 1173:22, 1185:4, 1185:23, 1235:21, 1326:17, 1342:15, 1359:10, 1359:17, 1365:24, 1370:7
electronic [3] - 1165:11, 1175:3, 1175:7
element [10] - 1168:22, 1174:9, 1174:16, 1175:24, 1176:6, 1177:18, 1179:5, 1313:17, 1353:3, 1370:11
elements [5] - 1170:16, 1178:23, 1194:22, 1224:3, 1238:20
elicited [1] - 1261:3
employee [1] - 1298:18
employees [7] - 1235:21, 1256:4, 1256:8, 1257:15, 1272:20, 1307:17, 1310:6
enable [1] - 1166:3
end [6] - 1168:9, 1168:12, 1248:4,

**1265:5, 1297:6, 1356:13
ended [2] - 1293:24, 1304:22
ending [4] - 1219:18, 1264:8, 1264:13, 1369:3
ends [2] - 1219:18, 1220:11
engineers [2] - 1236:10, 1236:17
English [4] - 1211:5, 1211:16, 1255:8
enter [2] - 1287:5, 1324:17
entered [4] - 1287:23, 1295:12, 1295:21, 1298:19
entering [3] - 1167:21, 1261:10, 1366:21
Enterprise [7] - 1302:14, 1304:10, 1304:12, 1304:15, 1313:11, 1316:2, 1341:5
entire [2] - 1210:8, 1234:19
entirely [2] - 1166:14, 1363:1
entities [1] - 1263:4
entitled [3] - 1274:24, 1275:7, 1350:20
envision [1] - 1362:24
envisioned [1] - 1175:20
equipment [1] - 1269:7
especially [3] - 1252:19, 1281:8, 1359:19
ESQ [10] - 1154:18, 1154:19, 1154:21, 1154:22, 1154:22, 1154:23, 1155:4, 1155:7, 1155:7, 1155:8
essence [2] - 1180:4, 1184:10
essential [2] - 1174:16, 1348:1
essentially [3] - 1271:15, 1274:11, 1322:24
established [3] - 1241:4, 1251:2, 1370:20
Euro [1] - 1159:2
Euros [4] - 1157:24, 1285:1, 1286:13, 1287:1

euros [2] - 1324:20, 1325:11
evaluate [7] - 1271:1, 1289:12, 1300:4, 1301:21, 1307:20, 1336:15, 1352:7
evaluated [5] - 1278:14, 1278:16, 1307:22, 1321:15, 1336:17
evaluating [3] - 1199:3, 1318:11, 1344:18
evaluation [1] - 1322:5
evaluations [1] - 1336:10
evening [1] - 1167:9
event [12] - 1190:1, 1198:16, 1199:20, 1218:16, 1218:23, 1236:13, 1242:11, 1245:6, 1271:5, 1275:9, 1294:15, 1331:2
events [3] - 1157:21, 1158:16, 1336:14
eventually [1] - 1180:18
evidence [48] - 1200:3, 1247:1, 1254:16, 1260:5, 1265:7, 1287:20, 1287:21, 1288:20, 1292:16, 1292:17, 1292:19, 1293:7, 1293:8, 1293:20, 1314:7, 1327:14, 1330:11, 1330:13, 1330:15, 1330:21, 1337:3, 1338:2, 1340:24, 1347:8, 1347:14, 1347:17, 1347:18, 1347:23, 1355:7, 1357:17, 1357:24, 1358:5, 1358:14, 1358:16, 1358:19, 1359:8, 1359:12, 1360:16, 1360:23, 1363:5, 1364:10, 1365:11, 1370:9, 1370:10, 1370:16, 1370:17, 1370:21, 1371:6
evidently [1] - 1329:14
evolve [1] - 1259:1
exactly [3] - 1163:11, 1268:1, 1357:21
examination [19] - 1160:16, 1163:10,

1188:22, 1199:9, 1204:22, 1209:12, 1211:21, 1218:1, 1220:19, 1222:1, 1225:20, 1229:2, 1237:6, 1239:14, 1240:9, 1242:1, 1242:23, 1292:21, 1357:19

EXAMINATION [4] - 1187:3, 1249:4, 1266:9, 1352:15

examined [1] - 1266:5

example [12] - 1157:23, 1225:2, 1239:5, 1257:13, 1268:20, 1272:5, 1291:7, 1300:1, 1300:3, 1308:17, 1349:4, 1364:10

examples [1] - 1301:8

excerpt [1] - 1174:20

exchange [1] - 1156:18

exchanged [2] - 1156:9, 1156:23

excludes [1] - 1156:13

exclusive [20] - 1283:13, 1284:4, 1284:5, 1286:1, 1288:21, 1288:22, 1289:1, 1289:3, 1289:6, 1289:7, 1295:14, 1296:7, 1322:1, 1323:5, 1324:23, 1345:20, 1345:23, 1346:14, 1346:22, 1346:23

excused [5] - 1254:4, 1354:23, 1368:18, 1368:22, 1369:10

execute [1] - 1245:1

executed [1] - 1368:13

executes [1] - 1368:9

executives [1] - 1257:15

Exhibit [16] - 1175:23, 1178:11, 1180:13, 1182:14, 1184:4, 1201:2, 1205:2, 1206:11, 1209:15, 1230:8, 1259:5, 1264:6, 1285:2, 1285:16, 1350:1, 1353:7

exhibit [23] - 1162:6, 1163:4, 1164:1, 1165:21, 1166:3, 1166:9, 1174:12, 1177:20, 1179:1,

1183:16, 1184:3, 1191:5, 1194:8, 1196:10, 1212:1, 1212:4, 1216:19, 1219:14, 1239:13, 1240:3, 1240:6, 1254:9, 1309:18

exhibits [15] - 1164:18, 1164:19, 1165:2, 1165:6, 1165:10, 1165:17, 1166:1, 1166:2, 1170:21, 1171:2, 1254:14, 1254:16, 1355:3, 1355:7, 1355:20

exist [1] - 1163:15

existed [3] - 1175:1, 1253:11, 1300:11

existence [1] - 1184:17

exits [2] - 1259:14, 1369:19

expectation [1] - 1233:20

expected [2] - 1293:2, 1369:5

expensive [1] - 1302:13

experiment [1] - 1258:8

expert [25] - 1158:6, 1158:12, 1160:17, 1188:13, 1191:3, 1213:17, 1251:6, 1265:15, 1268:14, 1272:14, 1273:2, 1273:22, 1276:23, 1292:24, 1293:5, 1326:7, 1326:13, 1326:23, 1328:15, 1328:16, 1329:1, 1330:8, 1330:10, 1330:12

expert's [1] - 1292:20

expertise [4] - 1326:11, 1326:17, 1326:19, 1327:19

experts [8] - 1187:5, 1272:15, 1276:3, 1276:18, 1307:10, 1332:8, 1336:13

experts' [1] - 1358:7

expiring [1] - 1288:14

explain [3] - 1192:19, 1277:1, 1363:22

explained [1] - 1341:16

explaining [1] - 1158:7

explanation [2] - 1221:11, 1242:5

exploitation [1] - 1283:12

explored [1] - 1305:7

Explorer [1] - 1308:15

exploring [2] - 1303:18, 1305:21

expressed [1] - 1213:15

extent [8] - 1157:1, 1170:8, 1249:14, 1291:8, 1321:6, 1326:18, 1329:17, 1333:7

extract [1] - 1241:20

extremely [3] - 1246:22, 1249:1, 1249:2

eyes [1] - 1171:3

face [1] - 1292:8

facility [2] - 1201:21, 1202:1

fact [11] - 1159:4, 1175:8, 1187:17, 1195:15, 1228:16, 1233:8, 1235:9, 1237:15, 1295:14, 1306:12, 1324:12

factor [19] - 1277:16, 1278:11, 1279:9, 1281:5, 1289:9, 1289:13, 1296:24, 1299:19, 1299:20, 1299:21, 1300:5, 1301:14, 1307:8, 1307:9, 1307:21, 1317:2, 1317:4, 1322:3, 1325:2

factors [26] - 1278:13, 1278:14, 1278:15, 1278:21, 1278:24, 1279:1, 1279:11, 1280:20, 1280:22, 1286:19, 1288:2, 1288:3, 1291:5, 1294:6, 1294:9, 1301:13, 1301:14, 1301:15, 1301:22, 1310:12, 1310:15, 1322:23, 1325:3, 1325:5, 1336:12

failed [2] - 1242:7, 1242:13

fair [7] - 1190:16, 1193:5, 1209:9, 1213:22, 1214:2, 1218:15, 1328:14

fairness [1] - 1222:3

fall [2] - 1156:19,

1277:20

Falls [1] - 1201:22

familiar [7] - 1190:7, 1190:22, 1261:22, 1264:9, 1264:10, 1264:11, 1350:6

far [5] - 1237:21, 1259:3, 1341:8, 1349:11, 1360:12

FARNAN [3] - 1154:18, 1154:18, 1154:19

fashion [1] - 1248:24

fast [2] - 1252:15, 1252:21

fault [2] - 1163:23, 1360:6

favorable [2] - 1318:12, 1323:11

feature [4] - 1175:13, 1175:14, 1220:2, 1226:12

features [4] - 1227:4, 1227:6, 1295:2, 1321:4

Federal [3] - 1260:3, 1292:18, 1370:4

federal [14] - 1304:13, 1304:16, 1311:18, 1311:20, 1311:23, 1312:1, 1312:2, 1313:12, 1316:1, 1316:8, 1316:23

fee [6] - 1308:20, 1309:15, 1340:8, 1340:12, 1340:17, 1340:19

feeding [1] - 1192:8

fees [1] - 1309:1

feet [1] - 1164:20

fetch [1] - 1206:20

fetching [4] - 1207:4, 1207:13, 1207:17, 1207:21

few [8] - 1186:5, 1226:12, 1227:6, 1250:18, 1262:10, 1284:21, 1303:16, 1365:1

field [15] - 1176:19, 1177:10, 1177:11, 1177:12, 1178:4, 1205:17, 1206:1, 1207:15, 1208:10, 1208:19, 1208:24, 1209:3, 1223:2, 1249:9, 1268:8

Figure [1] - 1178:9

figure [12] - 1163:11, 1224:1, 1224:2,

1224:6, 1224:12, 1225:9, 1225:11, 1297:7, 1297:8, 1323:15, 1337:20, 1367:21

figures [1] - 1324:12

file [8] - 1198:9, 1238:24, 1239:10, 1239:17, 1240:1, 1240:8, 1247:16, 1364:14

files [7] - 1238:4, 1238:15, 1239:4, 1246:16, 1246:19, 1247:16, 1250:3

filing [1] - 1172:10

fill [1] - 1269:9

final [7] - 1157:2, 1164:18, 1180:21, 1182:5, 1185:6, 1293:7, 1369:6

finalized [1] - 1157:1

finally [2] - 1272:24, 1295:18

financial [8] - 1272:8, 1279:5, 1301:18, 1306:9, 1323:7, 1326:20, 1332:8, 1333:8

findings [1] - 1161:9

fine [15] - 1229:10, 1229:19, 1230:1, 1230:3, 1231:22, 1232:21, 1249:10, 1249:13, 1249:14, 1249:20, 1251:24, 1261:5, 1351:9, 1363:23, 1365:14

finish [3] - 1242:17, 1243:12, 1356:10

finished [3] - 1243:7, 1243:17, 1243:23

firm [3] - 1167:5, 1273:4, 1273:8

firms [1] - 1281:8

first [61] - 1156:6, 1162:15, 1169:22, 1173:10, 1173:13, 1173:14, 1174:20, 1179:24, 1185:19, 1191:13, 1200:5, 1200:8, 1211:12, 1213:11, 1219:24, 1231:12, 1239:20, 1243:7, 1243:11, 1250:20, 1252:5, 1252:22, 1253:12, 1256:3, 1263:23, 1264:3, 1264:13, 1264:15, 1266:3,

1269:22, 1279:17, 1280:7, 1280:12, 1280:19, 1280:21, 1282:15, 1282:16, 1282:19, 1289:14, 1290:17, 1294:10, 1313:6, 1313:13, 1315:18, 1317:24, 1339:6, 1341:11, 1341:22, 1342:11, 1344:14, 1344:22, 1344:23, 1345:4, 1345:6, 1350:2, 1359:14, 1362:2, 1362:14, 1363:2, 1369:7

five [16] - 1157:24, 1159:2, 1195:16, 1201:4, 1203:18, 1266:22, 1267:24, 1286:11, 1286:13, 1286:24, 1289:2, 1314:9, 1318:7, 1324:20, 1325:11, 1356:18

fixed [1] - 1163:20

flight [3] - 1176:14, 1176:24, 1222:14

flip [1] - 1166:3

flow [1] - 1322:24

flows [1] - 1311:11

flunking [1] - 1242:20

focus [6] - 1191:1, 1209:18, 1210:7, 1224:5, 1352:5, 1359:18

focused [2] - 1233:7, 1299:17

follow [4] - 1196:3, 1213:16, 1223:6, 1363:5

follow-up [1] - 1363:5

followed [1] - 1369:8

following [3] - 1211:13, 1254:6, 1355:7

follows [2] - 1211:12, 1266:5

FOR [1] - 1154:2

forcing [1] - 1211:7

foregoing [1] - 1372:9

forget [2] - 1351:24, 1352:4

form [11] - 1156:24, 1157:2, 1165:11, 1180:21, 1260:21, 1274:5, 1276:20, 1276:24, 1294:13, 1297:13, 1364:6

formal [2] - 1364:20,

1365:4

formed [3] - 1190:19, 1256:3, 1257:21

forming [1] - 1271:24

forms [1] - 1164:4

forth [6] - 1180:14, 1193:24, 1196:23, 1203:21, 1238:4, 1371:4

forward [3] - 1203:17, 1219:17, 1271:23

foundation [1] - 1292:14

founded [1] - 1266:22

four [10] - 1189:15, 1203:2, 1203:17, 1203:20, 1220:10, 1233:18, 1233:19, 1270:2, 1365:16, 1365:23

fourth [1] - 1200:14

framework [3] - 1278:4, 1278:7, 1278:10

Francisco [1] - 1269:24

frankly [1] - 1357:23

Free [10] - 1302:10, 1302:23, 1303:22, 1304:1, 1339:14, 1339:15, 1342:8, 1342:13, 1343:11, 1343:14

free [21] - 1174:7, 1187:6, 1302:7, 1302:10, 1302:21, 1308:10, 1318:23, 1338:15, 1338:19, 1338:22, 1339:2, 1339:11, 1339:19, 1340:4, 1340:10, 1340:20, 1341:8, 1341:10, 1341:13, 1341:18, 1342:10

freedom [1] - 1299:5

frequent [1] - 1236:16

frequently [2] - 1162:22, 1252:17

front [4] - 1162:11, 1186:21, 1298:8, 1332:3

frustum [1] - 1223:8

full [5] - 1201:9, 1220:2, 1241:21, 1241:24, 1351:6

full-feature [1] - 1220:2

Fuller [8] - 1200:17, 1201:1, 1202:4, 1202:19, 1203:10,

1203:20, 1204:5, 1204:15

fully [2] - 1163:7, 1299:12

function [1] - 1252:24

functionality [15] - 1294:23, 1295:1, 1295:3, 1300:10, 1300:23, 1301:2, 1301:4, 1301:5, 1301:9, 1302:13, 1321:4, 1340:22, 1341:1, 1341:3, 1341:4

Future [1] - 1219:20

general [1] - 1360:1

generally [1] - 1243:10

generate [4] - 1339:13, 1339:17, 1341:21, 1343:2

generations [4] - 1192:1, 1192:3, 1193:1, 1193:6

gentleman [1] - 1188:3

Geo [7] - 1291:16, 1294:19, 1302:3, 1306:17, 1306:19, 1306:22, 1310:10

geo [2] - 1191:24, 1295:9

geographic [1] - 1173:24

geography [1] - 1267:12

geological [1] - 1201:21

Georgia [16] - 1278:10, 1278:11, 1278:20, 1280:20, 1286:19, 1288:2, 1288:3, 1289:8, 1299:19, 1301:13, 1307:7, 1310:12, 1322:3, 1333:9, 1336:12, 1344:3

Georgia-Pacific [12] - 1278:10, 1278:11, 1278:20, 1280:20, 1286:19, 1288:2, 1288:3, 1301:13, 1307:7, 1310:12, 1336:12, 1344:3

German [3] - 1255:13, 1255:16, 1255:17

Geschdftsf [5] - 1255:7, 1255:14, 1255:16, 1255:24, 1257:18

gigabit [1] - 1202:23

gigabytes [3] - 1197:4, 1197:8, 1197:15

Gilbert [1] - 1188:3

given [7] - 1183:11, 1218:13, 1228:24, 1268:8, 1338:7, 1340:13, 1343:10

Given [1] - 1221:18

global [7] - 1183:14, 1184:4, 1184:7, 1184:15, 1185:10, 1185:15, 1226:11

globe [2] - 1173:22, 1231:18

Globe [7] - 1231:2, 1232:5, 1287:13, 1294:20, 1311:5, 1314:2, 1317:23

Glove [1] - 1275:19

GmbH [2] - 1154:4, 1255:22

goal [5] - 1196:7, 1196:24, 1197:2, 1197:5, 1198:1

Golden [1] - 1270:1

Goodchild [57] - 1160:17, 1167:18, 1167:24, 1168:4, 1174:1, 1174:8, 1176:22, 1183:19, 1186:3, 1187:5, 1188:21, 1198:16, 1212:10, 1214:14, 1215:2, 1231:11, 1241:17, 1242:10, 1249:6, 1253:24, 1254:6, 1259:21, 1259:22, 1260:11, 1260:12, 1261:2, 1272:20, 1289:19, 1289:20, 1290:3, 1290:4, 1290:5, 1290:23, 1292:11, 1292:22, 1293:2, 1294:22, 1320:14, 1321:12, 1322:15, 1326:13, 1326:23, 1327:8, 1327:22, 1328:21, 1329:5, 1329:21, 1330:5, 1347:19, 1347:21, 1357:18, 1359:21, 1360:1, 1361:21, 1362:16, 1363:17, 1363:18

Goodchild's [15] - 1162:19, 1163:1, 1186:11, 1300:6,

1300:9, 1300:22, 1321:1, 1322:16, 1327:1, 1328:11, 1329:23, 1348:4, 1357:22, 1360:7, 1362:20

GOOGLE [1] - 1154:6

Google [293] - 1157:5, 1187:14, 1187:17, 1189:11, 1189:12, 1190:19, 1190:21, 1191:15, 1191:24, 1193:10, 1213:23, 1214:10, 1219:14, 1229:7, 1229:22, 1229:24, 1230:9, 1230:23, 1231:9, 1232:20, 1233:6, 1233:8, 1233:14, 1234:3, 1235:20, 1235:21, 1236:6, 1236:10, 1236:17, 1237:22, 1237:24, 1238:16, 1243:14, 1243:23, 1244:4, 1244:9, 1244:12, 1244:20, 1245:1, 1245:3, 1245:7, 1245:23, 1246:1, 1246:7, 1246:11, 1247:10, 1247:12, 1249:8, 1249:18, 1250:22, 1251:13, 1251:15, 1251:21, 1252:5, 1252:17, 1253:5, 1253:11, 1253:12, 1253:18, 1254:7, 1254:20, 1255:1, 1262:2, 1262:3, 1262:7, 1265:14, 1271:4, 1271:6, 1272:7, 1272:11, 1272:21, 1272:23, 1273:11, 1274:11, 1274:14, 1275:12, 1275:15, 1275:17, 1276:14, 1279:15, 1280:11, 1280:23, 1281:18, 1281:20, 1282:5, 1282:19, 1284:3, 1284:6, 1284:24, 1285:9, 1285:13, 1285:14, 1286:15, 1287:5, 1289:11, 1289:15, 1289:17, 1290:18, 1291:18, 1291:19, 1294:2, 1294:4, 1294:12, 1294:15, 1295:14, 1295:23, 1296:7,

1296:8, 1296:21, 1297:15, 1298:6, 1298:11, 1298:18, 1298:19, 1298:22, 1300:1, 1300:8, 1300:11, 1300:15, 1300:16, 1300:23, 1301:7, 1301:9, 1301:11, 1301:17, 1301:19, 1302:1, 1302:7, 1302:9, 1302:10, 1302:12, 1302:22, 1302:23, 1303:2, 1303:5, 1303:22, 1304:1, 1304:12, 1304:15, 1304:18, 1304:19, 1304:20, 1304:22, 1304:23, 1305:1, 1305:5, 1305:6, 1305:8, 1305:13, 1305:14, 1305:15, 1305:18, 1305:19, 1306:1, 1306:5, 1306:6, 1306:10, 1306:13, 1306:14, 1306:18, 1307:5, 1307:17, 1307:19, 1307:24, 1308:3, 1308:4, 1308:6, 1308:7, 1308:10, 1308:11, 1308:13, 1308:16, 1308:18, 1309:2, 1309:9, 1309:15, 1310:2, 1310:3, 1310:7, 1313:4, 1313:6, 1313:7, 1313:8, 1313:10, 1313:11, 1313:20, 1313:22, 1314:2, 1314:3, 1315:1, 1315:4, 1315:5, 1315:13, 1316:12, 1317:5, 1317:8, 1317:21, 1318:22, 1319:9, 1319:10, 1320:1, 1320:2, 1320:5, 1320:17, 1320:18, 1320:19, 1321:2, 1321:5, 1323:14, 1324:10, 1324:13, 1324:14, 1326:16, 1329:19, 1331:7, 1331:9, 1331:12, 1331:18, 1333:14, 1333:21, 1333:24, 1336:8, 1337:5, 1338:9, 1338:14, 1338:18, 1338:21, 1339:1, 1339:2,

1339:3, 1339:10, 1339:14, 1339:16, 1339:19, 1342:8, 1342:13, 1342:19, 1342:20, 1342:24, 1343:3, 1343:4, 1343:10, 1343:14, 1344:8, 1344:15, 1345:1, 1345:7, 1345:9, 1347:4, 1347:12, 1348:2, 1348:22, 1348:23, 1349:6, 1349:12, 1350:7, 1350:12, 1350:16, 1350:17, 1350:20, 1350:23, 1352:20, 1352:21, 1352:23, 1353:12, 1353:21, 1358:19, 1358:23, 1359:17, 1363:7, 1366:9, 1366:15, 1367:3, 1367:16, 1367:19, 1368:24, 1370:4, 1370:22, 1371:6
Google's [20] - 1190:3, 1212:1, 1236:11, 1236:15, 1237:19, 1241:23, 1245:18, 1248:17, 1282:5, 1298:1, 1300:1, 1300:14, 1324:14, 1339:24, 1348:19, 1358:1, 1358:6, 1358:12, 1359:4, 1363:3
Google.com [3] - 1348:15, 1348:20, 1351:12
Gore [3] - 1193:16, 1193:18, 1193:24
Gore's [2] - 1194:5, 1194:23
government [8] - 1304:14, 1304:16, 1311:18, 1311:20, 1312:1, 1312:2, 1313:12
grace [3] - 1172:12, 1172:15, 1172:22
grad [1] - 1267:21
grade [6] - 1242:7, 1242:8, 1242:13, 1242:14, 1242:17
graininess [1] - 1198:18
grainy [1] - 1200:6
granted [1] - 1167:15
graphics [3] - 1208:15, 1217:16,

1219:5
great [2] - 1241:14, 1303:4
greater [2] - 1291:8, 1297:1
green [2] - 1210:9, 1312:9
grid [1] - 1180:22
ground [1] - 1163:6
grounds [1] - 1371:4
group [5] - 1301:15, 1306:18, 1306:20, 1306:22, 1341:12
groups [1] - 1239:8
grow [1] - 1303:14
growing [2] - 1269:10, 1307:4
growth [2] - 1305:22, 1305:23
guess [2] - 1262:1, 1368:18
hac [3] - 1167:4, 1167:7, 1167:15
half [1] - 1325:23
hand [7] - 1157:14, 1172:10, 1186:6, 1249:1, 1259:4, 1305:22, 1372:15
handing [4] - 1165:8, 1186:23, 1259:4, 1264:6
handle [2] - 1164:24, 1195:9
happy [3] - 1157:14, 1242:6, 1266:15
hard [2] - 1218:11, 1244:15
hardware [2] - 1208:15, 1300:17
Hawes [2] - 1157:6, 1355:19
HAWES [26] - 1154:22, 1157:7, 1157:14, 1159:23, 1160:10, 1162:12, 1259:18, 1260:23, 1261:8, 1265:8, 1289:21, 1291:21, 1292:2, 1292:15, 1293:1, 1293:15, 1293:18, 1293:23, 1325:14, 1325:20, 1326:1, 1326:2, 1352:13, 1354:16, 1355:13, 1355:21
Hawkins [3] - 1372:7, 1372:19, 1372:20
he/she [3] - 1209:21, 1211:1, 1211:11
head [1] - 1192:23

headed [1] - 1221:18
heading [7] - 1194:18, 1202:8, 1203:20, 1219:20, 1220:22, 1350:16, 1350:17
headlining [1] - 1208:11
hear [14] - 1175:11, 1189:10, 1189:14, 1189:17, 1189:23, 1207:2, 1229:11, 1327:4, 1327:8, 1328:3, 1333:19, 1344:7, 1361:12, 1362:16
heard [29] - 1187:10, 1187:24, 1207:6, 1218:5, 1218:16, 1230:19, 1250:2, 1251:5, 1253:10, 1263:22, 1272:21, 1272:22, 1275:15, 1275:20, 1281:20, 1281:23, 1282:3, 1285:10, 1287:11, 1291:22, 1300:21, 1302:7, 1308:8, 1308:20, 1310:5, 1338:4, 1349:20, 1353:19, 1353:23
hearing [2] - 1186:13, 1268:5
hearings [1] - 1268:17
help [4] - 1213:20, 1273:9, 1302:24, 1307:5
helpful [4] - 1166:12, 1247:4, 1279:5, 1361:24
helps [1] - 1172:3
hereby [1] - 1372:9
herein [1] - 1266:3
hereunto [1] - 1372:14
Hibbard [1] - 1175:5
high [9] - 1175:3, 1175:7, 1178:19, 1189:22, 1190:16, 1204:6, 1220:3, 1239:11, 1269:11
high-level [1] - 1190:16
higher [5] - 1224:20, 1228:5, 1240:16, 1295:7, 1323:15
highlight [9] - 1191:23, 1194:20, 1196:22, 1202:17, 1226:17, 1351:5, 1351:24, 1352:5, 1352:10

highlighted [25] - 1173:20, 1174:14, 1177:13, 1178:14, 1180:7, 1201:16, 1205:2, 1205:6, 1205:12, 1205:21, 1205:23, 1206:18, 1210:2, 1210:5, 1211:3, 1222:13, 1222:19, 1223:12, 1226:3, 1226:7, 1226:21, 1227:8, 1228:4, 1239:16, 1351:4
highlighting [6] - 1156:16, 1209:19, 1209:20, 1210:9, 1351:7, 1352:5
highlights [1] - 1250:4
hired [5] - 1188:1, 1188:11, 1190:19, 1190:21, 1191:3
Hitchcock [1] - 1351:19
hodgepodge [1] - 1358:20
home [3] - 1270:1, 1303:8, 1340:15
Honor [69] - 1156:5, 1157:4, 1157:7, 1157:16, 1158:22, 1159:20, 1159:23, 1160:8, 1160:10, 1160:14, 1162:5, 1162:15, 1163:22, 1164:16, 1165:5, 1167:3, 1167:17, 1186:4, 1188:9, 1188:15, 1250:11, 1250:14, 1253:21, 1254:2, 1254:5, 1254:20, 1259:18, 1260:23, 1261:7, 1261:8, 1265:6, 1265:9, 1265:13, 1266:7, 1289:21, 1291:22, 1292:2, 1292:15, 1293:1, 1325:14, 1325:21, 1326:1, 1352:14, 1354:15, 1354:17, 1355:1, 1355:2, 1355:14, 1355:18, 1355:22, 1356:11, 1356:20, 1357:2, 1357:4, 1361:9, 1361:16, 1362:9, 1363:10, 1363:15, 1363:21, 1364:5, 1364:24, 1367:3,

1368:16, 1369:1,
1369:23, 1370:1,
1370:3, 1371:1
honor [1] - 1371:6
HONORABLE [1] -
1154:13
hoped [1] - 1302:22
hour [6] - 1187:10,
1187:15, 1273:5,
1325:23, 1356:14,
1365:11
hours [5] - 1248:3,
1248:5, 1263:8,
1273:12, 1273:14
house [1] - 1350:24
hrer [5] - 1255:7,
1255:14, 1255:16,
1256:1, 1257:18
hundred [5] - 1258:8,
1258:17, 1346:24,
1347:9, 1347:12
hundreds [2] - 1197:4,
1197:14
Hyatt [1] - 1188:4
hypothetical [40] -
1157:18, 1158:3,
1158:11, 1158:16,
1159:7, 1159:21,
1159:22, 1160:6,
1170:2, 1179:20,
1184:13, 1274:13,
1274:21, 1279:8,
1279:12, 1279:21,
1280:4, 1280:14,
1280:18, 1283:21,
1284:3, 1284:7,
1286:23, 1295:22,
1296:2, 1312:18,
1312:19, 1312:22,
1312:24, 1322:8,
1323:21, 1323:22,
1324:24, 1334:6,
1334:7, 1334:11,
1335:21, 1336:17,
1336:22, 1354:2
hypothetically [2] -
1279:23, 1336:23
i.e [1] - 1201:16
idea [8] - 1165:14,
1175:18, 1180:8,
1183:22, 1197:24,
1252:14, 1332:23,
1333:3
ideas [1] - 1283:12
identifiable [1] -
1358:22
identified [9] -
1193:11, 1200:6,
1204:9, 1282:6,
1301:3, 1304:9,

1308:1, 1317:16,
1353:5
identifies [2] - 1166:9,
1204:5
identify [6] - 1199:6,
1280:21, 1281:13,
1287:17, 1312:11,
1353:1
identifying [1] -
1289:24
identity [1] - 1191:1
illustrate [1] - 1172:3
illustrated [2] -
1232:1, 1232:11
illustrating [1] -
1199:24
illustration [3] -
1178:3, 1178:7,
1180:17
image [15] - 1180:18,
1224:14, 1226:9,
1226:22, 1228:10,
1228:11, 1228:14,
1228:18, 1232:6,
1249:19, 1249:20,
1252:22, 1252:23,
1368:5, 1368:10
imagery [2] - 1239:21,
1240:11
images [3] - 1300:20,
1301:11, 1368:2
immaterial [1] -
1169:21
immediately [2] -
1189:4, 1368:11
impact [1] - 1276:6
impart [1] - 1348:10
impediment [2] -
1215:4, 1216:12
impermissible [1] -
1358:9
implement [1] -
1175:14
implementation [1] -
1315:3
implemented [3] -
1353:15, 1353:21,
1353:23
implementing [1] -
1229:19
implication [1] -
1227:4
implies [1] - 1226:10
important [23] -
1162:14, 1165:2,
1172:17, 1179:17,
1281:4, 1281:7,
1281:9, 1281:15,
1282:12, 1283:19,
1284:17, 1286:4,

1286:19, 1291:2,
1306:23, 1311:16,
1312:1, 1317:1,
1324:3, 1325:2,
1325:4, 1325:5,
1369:12
impose [1] - 1166:15
improved [1] -
1228:14
IN [2] - 1154:1,
1372:14
inactive [3] - 1258:15,
1258:16
inclined [1] - 1361:4
include [13] - 1275:15,
1314:4, 1317:20,
1319:5, 1323:11,
1348:24, 1349:3,
1349:8, 1349:11,
1352:19, 1353:2,
1353:4, 1353:11
included [13] - 1192:3,
1291:13, 1299:15,
1301:7, 1314:11,
1314:14, 1314:18,
1317:12, 1318:18,
1319:14, 1319:18,
1348:14, 1353:17
includes [3] - 1257:2,
1311:4, 1370:13
including [9] - 1165:1,
1214:11, 1235:10,
1272:19, 1272:20,
1272:21, 1290:22,
1309:3
inclusive [1] - 1372:10
incomplete [1] -
1293:11
incomprehensible [1]
- 1357:23
inconsistent [2] -
1233:1, 1359:1
INCORPORATED [1] -
1154:6
increase [1] - 1302:24
increment [2] -
1205:15, 1205:17
incremental [2] -
1205:8, 1210:11
increments [1] -
1205:16
indeed [6] - 1179:4,
1207:18, 1211:8,
1228:21, 1235:8,
1359:11
independently [1] -
1215:1
indicate [1] - 1286:18
indicated [4] -
1202:21, 1205:7,

1206:19, 1291:2
indicating [1] -
1283:10
indication [1] -
1278:24
individual [1] -
1364:12
individuals [6] -
1272:6, 1272:7,
1273:8, 1307:24,
1340:14, 1352:23
industries [1] - 1269:5
industry [1] - 1267:23
inform [1] - 1156:6
informal [5] - 1167:8,
1260:20, 1364:19,
1365:7, 1371:12
informally [1] -
1364:22
information [31] -
1182:20, 1199:2,
1199:12, 1202:13,
1205:20, 1206:1,
1232:17, 1234:11,
1247:23, 1248:22,
1271:2, 1272:10,
1291:13, 1300:8,
1300:19, 1301:19,
1302:2, 1302:17,
1302:18, 1306:9,
1311:10, 1319:14,
1328:21, 1329:8,
1333:16, 1344:21,
1347:21, 1348:3,
1348:9, 1362:21
informative [1] -
1302:4
informed [1] - 1245:8
infringed [13] -
1262:4, 1265:19,
1271:6, 1275:7,
1276:1, 1276:13,
1276:16, 1294:16,
1296:16, 1296:19,
1296:24, 1331:15,
1354:5
infringement [20] -
1214:19, 1229:1,
1236:19, 1238:5,
1269:14, 1269:15,
1270:6, 1270:15,
1271:9, 1271:14,
1271:17, 1277:4,
1277:18, 1279:17,
1280:12, 1331:13,
1357:14, 1360:21,
1360:22, 1371:3
infringer [6] - 1331:4,
1331:7, 1331:8,
1331:11, 1352:3,

1352:9
infringes [1] - 1247:12
infringing [1] - 1262:7
inherent [1] - 1206:22
initial [1] - 1280:8
Innovation [1] -
1255:22
INNOVATIONAL [1] -
1154:3
input [8] - 1310:15,
1320:14, 1320:16,
1321:1, 1322:4,
1322:16, 1348:4,
1349:4
insignificant [1] -
1228:2
insofar [1] - 1236:4
installation [1] -
1308:24
installations [1] -
1318:21
installed [1] - 1343:4
instance [5] -
1207:12, 1331:16,
1359:14, 1360:2,
1360:4
instances [2] -
1358:22, 1359:20
instead [6] - 1159:20,
1190:1, 1218:10,
1248:12, 1248:16,
1337:6
institution [1] - 1295:7
instruct [1] - 1361:5
instructions [4] -
1156:24, 1361:9,
1365:2, 1369:7
insuperable [3] -
1192:2, 1192:7,
1193:11
integrate [1] - 1177:16
intellectual [6] -
1198:14, 1266:18,
1268:4, 1268:9,
1268:11, 1291:12
intend [1] - 1162:7
intended [1] - 1160:16
intent [1] - 1209:2
interactions [1] -
1255:1
interest [11] - 1209:22,
1211:2, 1211:12,
1248:21, 1285:9,
1285:12, 1302:24,
1305:17, 1335:12,
1340:16, 1345:20
interested [7] -
1226:18, 1227:5,
1264:5, 1271:12,
1287:15, 1303:1,

1305:20
interface [2] - 1173:23, 1207:9
interference [1] - 1160:20
internal [1] - 1350:12
International [4] - 1188:23, 1196:15, 1263:20, 1264:1
International's [1] - 1264:24
internet [6] - 1175:3, 1192:9, 1252:20, 1268:21, 1268:23, 1368:6
Internet [1] - 1308:14
interpretation [1] - 1358:8
INTERPRETER [1] - 1258:14
interpreting [1] - 1225:3
interrelated [1] - 1245:20
intersect [1] - 1223:8
introduce [1] - 1266:13
introduced [1] - 1296:17
introducing [1] - 1281:21
introduction [3] - 1202:9, 1206:19, 1280:10
invalid [7] - 1172:18, 1181:7, 1186:1, 1214:22, 1296:23, 1370:7, 1370:21
invalidity [7] - 1171:8, 1185:7, 1213:16, 1214:18, 1214:24, 1360:17, 1360:20
invention [10] - 1190:14, 1193:12, 1198:20, 1331:3, 1333:12, 1343:22, 1352:3, 1352:8, 1354:3, 1358:15
inventors [3] - 1175:12, 1175:22, 1220:7
investigation [1] - 1171:20
investment [3] - 1300:15, 1300:17, 1300:21
invite [1] - 1191:4
involved [2] - 1213:21, 1247:15
involves [1] - 1231:21

involving [1] - 1269:10
irrelevant [3] - 1159:10, 1162:10, 1188:15
Irvine [1] - 1267:13
ISS [1] - 1201:17
issuance [2] - 1183:24, 1280:8
issue [29] - 1156:19, 1157:4, 1157:16, 1161:12, 1161:15, 1166:5, 1204:4, 1211:23, 1212:21, 1238:6, 1259:19, 1260:23, 1270:12, 1271:13, 1271:14, 1274:4, 1274:15, 1277:15, 1293:21, 1295:4, 1315:7, 1315:20, 1320:8, 1326:22, 1327:16, 1327:20, 1349:2, 1349:5, 1352:23
issued [2] - 1280:9, 1295:15
issues [20] - 1203:21, 1203:23, 1204:10, 1204:14, 1228:23, 1268:3, 1268:4, 1268:11, 1268:15, 1271:13, 1271:14, 1271:23, 1272:16, 1272:17, 1272:18, 1273:10, 1273:20, 1279:5, 1279:18, 1301:15
item [2] - 1200:14, 1279:7
items [1] - 1158:22
itself [3] - 1175:17, 1262:15, 1293:7
JACK [1] - 1155:4
Jaguar [1] - 1269:3
Jaguar/Land [1] - 1269:2
January [13] - 1159:5, 1264:13, 1264:23, 1282:4, 1282:20, 1283:7, 1288:23, 1310:23, 1321:24, 1324:21, 1344:18, 1345:14, 1345:15
jerkiness [3] - 1252:14, 1252:16, 1252:19
John [1] - 1360:6
joint [3] - 1245:19, 1245:24, 1246:6
jointly [1] - 1234:20

Jones [9] - 1268:22, 1282:6, 1282:21, 1286:9, 1344:4, 1344:7, 1344:19, 1344:23, 1345:10
Jones' [2] - 1344:22, 1345:3
Jose [1] - 1269:24
Judge [2] - 1154:14, 1365:20
judgement [1] - 1335:11
judgment [1] - 1370:5
July [8] - 1274:18, 1275:1, 1280:16, 1288:17, 1312:15, 1313:2, 1334:4, 1334:9
June [1] - 1302:20
June/July [1] - 1336:7
juror [1] - 1366:5
jury [105] - 1156:24, 1158:10, 1158:14, 1158:15, 1160:2, 1162:11, 1164:5, 1164:20, 1165:9, 1167:19, 1167:21, 1167:24, 1168:7, 1169:9, 1171:16, 1181:22, 1182:7, 1185:5, 1189:18, 1217:10, 1220:18, 1234:11, 1235:4, 1235:15, 1236:20, 1237:6, 1245:17, 1246:6, 1246:18, 1246:24, 1247:9, 1248:12, 1248:23, 1250:15, 1250:18, 1252:2, 1259:13, 1261:6, 1261:10, 1261:13, 1266:14, 1267:5, 1267:9, 1270:24, 1271:5, 1274:2, 1276:5, 1276:6, 1276:12, 1276:15, 1293:19, 1294:15, 1298:3, 1308:8, 1311:14, 1315:12, 1316:14, 1324:2, 1327:9, 1327:15, 1327:18, 1327:23, 1328:2, 1328:13, 1328:20, 1329:8, 1329:18, 1330:6, 1335:6, 1337:5, 1337:13, 1337:14, 1337:19, 1337:21, 1338:7, 1339:18, 1339:20,

1339:22, 1345:2, 1347:18, 1347:20, 1348:10, 1349:5, 1349:19, 1352:11, 1353:20, 1354:19, 1354:21, 1356:1, 1356:14, 1357:10, 1361:5, 1361:22, 1361:23, 1362:10, 1362:15, 1363:13, 1364:5, 1366:20, 1366:21, 1366:24, 1368:19, 1369:3, 1369:6, 1370:13
Jury [3] - 1259:14, 1356:5, 1369:19
jury's [3] - 1165:15, 1173:3, 1247:22
justification [1] - 1160:21
keep [2] - 1244:16, 1321:13
Ken [1] - 1367:8
kept [2] - 1304:20, 1304:23
key [1] - 1280:5
kid [1] - 1242:5
kind [8] - 1173:23, 1239:6, 1268:2, 1273:16, 1308:14, 1332:9, 1351:18, 1365:20
King [2] - 1154:11, 1167:5
knowledge [7] - 1215:5, 1216:10, 1234:22, 1246:3, 1262:16, 1264:3, 1360:1
known [10] - 1175:8, 1176:17, 1179:19, 1183:12, 1184:16, 1185:2, 1223:6, 1270:4, 1336:8, 1336:19
knows [2] - 1176:13, 1222:14
label [2] - 1166:8, 1220:11
labels [1] - 1158:22
lack [2] - 1162:20, 1163:19
laid [6] - 1156:17, 1193:24, 1238:14, 1278:12, 1343:17, 1343:19
language [17] - 1173:9, 1174:18, 1176:13, 1179:13, 1180:6, 1181:24,

1196:22, 1205:7, 1205:11, 1205:23, 1211:2, 1222:19, 1227:23, 1331:6, 1331:11, 1333:11
large [6] - 1221:19, 1300:14, 1300:16, 1303:10, 1316:24, 1348:18
largely [1] - 1304:13
larger [5] - 1225:12, 1233:22, 1281:11, 1297:5, 1324:7
LARRY [1] - 1154:22
last [11] - 1157:12, 1160:15, 1168:9, 1169:22, 1191:19, 1213:21, 1263:8, 1279:7, 1279:9, 1304:24, 1364:4
lasts [1] - 1255:2
latest [2] - 1217:15, 1217:19
Lau [10] - 1171:23, 1172:4, 1189:3, 1189:11, 1189:14, 1189:17, 1189:21, 1190:2, 1198:2, 1200:6
Lau's [2] - 1198:11, 1207:2
law [8] - 1172:21, 1255:15, 1260:3, 1292:18, 1358:16, 1358:18, 1365:24, 1370:6
lawsuit [6] - 1189:12, 1190:20, 1190:22, 1211:23, 1248:3, 1358:1
lawyer [1] - 1184:19
lawyers [10] - 1190:3, 1212:2, 1241:23, 1245:18, 1246:1, 1246:7, 1248:18, 1358:1, 1363:4, 1369:5
lay [1] - 1292:14
lead [1] - 1303:9
leafing [1] - 1165:15
learn [2] - 1217:15, 1217:18
learned [1] - 1237:5
learning [1] - 1295:7
least [8] - 1218:6, 1218:16, 1230:1, 1238:17, 1243:14, 1264:12, 1304:2, 1329:12
leave [1] - 1197:18

leaving [1] - 1356:5
Leclerc [2] - 1198:5, 1264:15
led [1] - 1247:9
Lee [1] - 1261:20
left [2] - 1168:9, 1267:21
legal [5] - 1165:22, 1169:6, 1169:13, 1179:7, 1311:15
lend [1] - 1365:20
length [1] - 1332:5
less [16] - 1195:9, 1240:15, 1270:4, 1275:9, 1275:11, 1277:21, 1288:21, 1289:7, 1304:5, 1304:6, 1306:3, 1308:18, 1318:14, 1321:3, 1331:2, 1335:3
letter [4] - 1282:5, 1282:20, 1287:12, 1287:13
level [6] - 1176:21, 1177:15, 1189:22, 1190:16, 1225:2, 1227:14
levels [8] - 1178:15, 1178:19, 1180:9, 1180:19, 1182:23, 1226:4, 1228:5, 1233:19
license [79] - 1159:1, 1159:5, 1162:5, 1162:9, 1162:14, 1272:11, 1274:10, 1274:12, 1282:7, 1283:13, 1283:16, 1283:24, 1284:1, 1284:2, 1284:5, 1284:7, 1284:8, 1284:24, 1285:24, 1286:2, 1287:6, 1287:8, 1287:22, 1287:23, 1288:5, 1288:7, 1288:9, 1288:21, 1288:22, 1289:2, 1289:4, 1289:6, 1289:7, 1289:11, 1289:15, 1290:5, 1290:10, 1290:11, 1290:16, 1290:20, 1291:20, 1292:9, 1293:19, 1294:3, 1294:7, 1295:11, 1296:2, 1296:5, 1297:13, 1298:19, 1298:21, 1299:5, 1299:13,

1303:12, 1311:1, 1311:12, 1313:11, 1316:9, 1316:10, 1316:24, 1322:1, 1323:5, 1324:23, 1326:10, 1332:3, 1332:5, 1334:2, 1334:12, 1334:15, 1337:7, 1337:17, 1345:20, 1345:23, 1346:6, 1346:9, 1346:17, 1346:22, 1346:23
licensed [4] - 1289:17, 1295:14, 1313:6, 1313:9
licensee [5] - 1279:14, 1284:6, 1295:24, 1298:5, 1331:17
licenses [5] - 1290:13, 1297:10, 1324:18, 1347:1
licensing [20] - 1262:20, 1262:21, 1262:22, 1271:12, 1278:13, 1279:11, 1281:1, 1282:22, 1283:12, 1290:17, 1291:1, 1291:4, 1295:10, 1303:2, 1315:18, 1316:19, 1339:7, 1341:23, 1342:4, 1342:5
licensor [2] - 1279:14, 1295:23
licensors [1] - 1295:20
lies [1] - 1360:7
light [4] - 1161:18, 1185:7, 1188:18, 1364:9
likely [2] - 1308:18, 1340:2
likewise [1] - 1224:18
limit [1] - 1227:14
limitation [1] - 1238:18
limitations [4] - 1195:20, 1358:6, 1360:11, 1360:23
limited [5] - 1192:9, 1317:24, 1340:13, 1361:19, 1362:1
Line [4] - 1215:22, 1216:1, 1216:21, 1217:1
line [11] - 1196:19, 1206:15, 1208:9, 1210:3, 1224:1, 1239:20, 1240:10,

1240:23, 1300:21, 1313:19, 1358:7
lined [1] - 1225:22
lines [2] - 1223:12, 1240:23
lining [2] - 1209:14, 1222:8
linked [1] - 1193:2
linking [2] - 1226:15, 1358:20
links [3] - 1178:15, 1226:3, 1358:21
list [12] - 1162:6, 1165:1, 1192:8, 1192:15, 1200:9, 1200:10, 1200:14, 1203:2, 1210:19, 1212:16, 1237:9, 1279:7
listed [6] - 1183:1, 1213:1, 1239:4, 1246:11, 1246:15, 1298:24
listen [1] - 1171:22
listened [2] - 1230:15, 1273:1
lists [2] - 1199:1, 1199:11
literally [1] - 1370:12
litigation [1] - 1188:3
live [1] - 1272:22
LLP [2] - 1154:18, 1155:6
load [1] - 1240:20
loaded [2] - 1240:16, 1240:17
local [3] - 1211:8, 1218:11, 1301:4
locally [1] - 1177:17
located [3] - 1201:15, 1201:18, 1202:1
location [2] - 1182:21, 1207:10
locked [1] - 1165:11
lod [3] - 1238:24, 1239:18, 1240:8
lod-manager [1] - 1240:8
lod-manager.js [2] - 1238:24, 1239:18
look [27] - 1162:24, 1163:17, 1163:18, 1166:11, 1168:10, 1198:6, 1200:12, 1206:12, 1209:7, 1211:22, 1211:24, 1219:11, 1219:13, 1239:9, 1242:6, 1250:21, 1253:4, 1274:7, 1303:7,

1318:4, 1318:5, 1337:21, 1338:12, 1340:15, 1345:17, 1350:24
looked [8] - 1170:17, 1198:17, 1205:4, 1217:7, 1217:8, 1304:2, 1318:21, 1345:7
looking [13] - 1172:6, 1206:15, 1232:14, 1283:2, 1303:7, 1303:18, 1305:19, 1313:21, 1333:24, 1339:5, 1350:3, 1367:22, 1368:4
looks [3] - 1235:5, 1241:16, 1242:12
Los [2] - 1266:16, 1267:3
lose [3] - 1162:23, 1277:13, 1277:14
lost [3] - 1270:12, 1277:2, 1277:15
low [1] - 1305:16
lower [2] - 1281:14, 1289:4
LUANN [1] - 1155:7
lump [39] - 1274:9, 1274:16, 1294:4, 1294:11, 1297:21, 1298:2, 1298:4, 1298:7, 1298:12, 1298:22, 1298:23, 1299:5, 1299:12, 1299:15, 1299:18, 1311:11, 1323:1, 1323:8, 1323:24, 1325:9, 1331:20, 1332:2, 1332:13, 1332:16, 1332:17, 1335:15, 1337:2, 1337:4, 1337:10, 1338:2, 1338:5, 1345:16, 1345:19, 1345:21, 1346:2, 1346:10, 1346:20, 1347:1, 1348:6
lunch [7] - 1325:16, 1325:24, 1354:20, 1355:3, 1355:24, 1356:12, 1356:14
luncheon [1] - 1356:24
machine [1] - 1201:15
Magic [2] - 1359:7, 1359:13
MAGIC [3] - 1200:15, 1202:9, 1202:19
mail [4] - 1259:8,

1261:18, 1264:12, 1286:8
mailed [1] - 1157:2
main [1] - 1234:15
maintain [1] - 1366:5
majority [1] - 1273:10
makeup [1] - 1242:18
manager [1] - 1240:8
manager.js [2] - 1238:24, 1239:18
managing [5] - 1254:22, 1255:11, 1255:13, 1255:18, 1255:20
manufactures [1] - 1311:21
map [3] - 1207:8, 1208:14, 1208:23
mapping [6] - 1183:14, 1184:4, 1184:7, 1184:15, 1185:10, 1185:15
maps [1] - 1306:21
Maps [27] - 1230:23, 1275:20, 1291:18, 1302:2, 1305:6, 1305:13, 1305:21, 1306:4, 1306:6, 1306:14, 1306:17, 1306:18, 1306:21, 1307:1, 1307:3, 1307:6, 1310:9, 1314:2, 1314:5, 1314:7, 1314:10, 1317:21, 1317:24, 1318:8, 1318:15, 1342:22, 1342:23
marketing [3] - 1272:8, 1280:24, 1326:20
Marshall [1] - 1270:5
massive [2] - 1195:1, 1195:24
masters [1] - 1267:14
material [4] - 1272:5, 1289:24, 1301:24
materially [1] - 1253:15
materials [7] - 1200:23, 1272:1, 1272:3, 1273:18, 1288:19, 1307:22, 1326:21
matter [20] - 1160:14, 1180:14, 1181:12, 1183:1, 1183:4, 1187:22, 1236:8, 1269:9, 1271:2, 1273:5, 1273:7, 1273:13, 1276:4,

1277:4, 1289:16, 1331:24, 1332:10, 1370:6, 1370:15, 1372:12

matters [6] - 1213:18, 1214:8, 1268:11, 1278:8, 1370:19, 1370:20

maximum [6] - 1158:1, 1158:24, 1274:15, 1285:13, 1323:17, 1324:15

Mayer [7] - 1218:5, 1218:16, 1261:20, 1264:14, 1282:21, 1286:8, 1286:12

McClendon's [1] - 1347:3

McCowan [1] - 1298:18

meal [1] - 1243:7

mean [9] - 1187:20, 1191:15, 1231:8, 1274:19, 1275:3, 1277:2, 1331:23, 1332:17, 1342:18

meaning [4] - 1223:15, 1228:17, 1247:18, 1257:12

meanings [1] - 1247:3

means [4] - 1240:20, 1298:4, 1298:5, 1332:17

meant [4] - 1221:20, 1231:9, 1308:18, 1362:9

meantime [1] - 1356:3

measure [2] - 1232:6, 1299:4

meet [1] - 1356:18

meeting [1] - 1172:13

meets [1] - 1204:19

members [4] - 1167:23, 1261:13, 1366:23, 1369:3

memory [6] - 1195:20, 1208:14, 1208:15, 1208:23, 1218:11, 1218:19

mention [1] - 1164:1

mentioned [13] - 1188:7, 1236:3, 1281:6, 1294:8, 1296:5, 1307:23, 1314:16, 1316:2, 1318:3, 1318:13, 1319:8, 1364:6, 1365:1

mentions [1] - 1228:12

menus [1] - 1242:24

Merit [1] - 1372:7

met [1] - 1279:23

method [1] - 1336:9

metric [1] - 1301:19

metrics [2] - 1272:9, 1333:18

MICHAEL [2] - 1154:19, 1154:22

Michelle [1] - 1261:20

Microsoft [3] - 1287:12, 1287:15, 1308:15

Microsoft's [1] - 1287:13

mid [18] - 1274:13, 1279:17, 1280:1, 1280:11, 1280:19, 1286:24, 1288:18, 1312:24, 1316:17, 1323:8, 1334:8, 1334:14, 1334:24, 1335:4, 1335:7, 1335:9, 1335:13, 1335:22

might [10] - 1164:24, 1235:12, 1255:12, 1255:14, 1304:2, 1307:12, 1307:14, 1307:18, 1361:23, 1362:15

million [36] - 1157:24, 1158:1, 1158:24, 1197:8, 1274:17, 1285:1, 1285:14, 1286:11, 1286:13, 1287:1, 1287:3, 1287:4, 1297:7, 1311:12, 1315:19, 1316:3, 1316:10, 1317:7, 1318:1, 1318:4, 1319:1, 1319:12, 1319:20, 1322:22, 1323:3, 1323:9, 1323:16, 1323:18, 1324:1, 1324:15, 1324:20, 1325:10, 1325:11, 1334:22, 1335:3, 1354:1

million's [1] - 1324:6

mind [3] - 1192:22, 1222:7, 1244:16

mine [2] - 1231:6, 1285:18

minimum [1] - 1197:12

minus [1] - 1368:5

minute [1] - 1283:15

minutes [3] - 1255:3,

1260:15, 1356:16

mischaracterizes [1] - 1236:22

mislead [1] - 1158:15

missing [1] - 1199:15

misspoke [1] - 1362:9

mistake [2] - 1231:7, 1231:11

models [1] - 1283:13

moment [8] - 1173:11, 1259:12, 1289:1, 1294:9, 1316:2, 1318:3, 1319:8, 1369:10

monetizing [2] - 1158:2, 1324:11

money [4] - 1339:21, 1340:2, 1340:3, 1342:9

months [2] - 1172:14, 1284:22

morning [13] - 1156:4, 1156:12, 1157:6, 1160:13, 1167:23, 1168:4, 1168:6, 1266:11, 1266:12, 1293:2, 1369:8, 1369:11, 1369:17

MORRIS [1] - 1155:4

most [5] - 1197:23, 1275:18, 1324:1, 1325:2, 1340:13

mostly [2] - 1269:11, 1302:20

motion [5] - 1167:15, 1369:24, 1370:23, 1371:2, 1371:8

motions [4] - 1356:13, 1357:1, 1357:3, 1361:14

motivated [2] - 1184:12, 1184:22

motivation [1] - 1184:24

move [32] - 1171:6, 1173:13, 1174:8, 1176:4, 1177:5, 1177:18, 1179:23, 1180:11, 1182:2, 1196:6, 1196:8, 1202:7, 1203:17, 1207:19, 1209:10, 1211:18, 1211:19, 1212:6, 1221:5, 1221:23, 1228:22, 1242:3, 1254:7, 1254:16, 1265:7, 1276:19, 1355:6, 1357:13, 1358:2, 1358:11, 1359:3,

1359:15

moves [1] - 1370:4

movie [1] - 1252:13

moving [4] - 1169:6, 1182:16, 1182:24, 1211:8

MR [137] - 1156:5, 1156:21, 1157:3, 1157:7, 1157:11, 1157:14, 1158:21, 1159:13, 1159:19, 1159:23, 1160:7, 1160:10, 1160:11, 1160:13, 1161:6, 1161:12, 1161:14, 1161:22, 1162:1, 1162:4, 1162:12, 1163:7, 1164:10, 1165:4, 1165:19, 1166:6, 1166:8, 1166:17, 1167:2, 1167:11, 1167:16, 1168:3, 1186:2, 1186:5, 1186:16, 1186:20, 1186:23, 1187:4, 1188:8, 1188:14, 1188:17, 1192:18, 1199:7, 1221:15, 1237:2, 1237:3, 1237:10, 1237:14, 1237:17, 1249:3, 1249:5, 1250:10, 1250:13, 1251:1, 1251:4, 1251:6, 1251:10, 1251:11, 1251:18, 1251:23, 1251:24, 1253:22, 1254:12, 1254:15, 1254:20, 1259:17, 1259:18, 1260:10, 1260:23, 1261:7, 1261:8, 1265:6, 1265:8, 1265:12, 1266:6, 1266:10, 1289:21, 1289:23, 1290:9, 1291:21, 1292:2, 1292:8, 1292:15, 1293:1, 1293:15, 1293:18, 1293:23, 1294:1, 1325:12, 1325:14, 1325:20, 1326:1, 1326:2, 1352:13, 1352:16, 1354:14, 1354:16, 1355:2, 1355:6, 1355:13, 1355:17, 1355:21, 1356:11, 1356:19, 1356:22, 1356:23, 1357:2, 1357:7,

1357:9, 1357:12, 1361:15, 1362:5, 1362:8, 1362:13, 1363:9, 1363:14, 1363:20, 1363:23, 1364:2, 1364:4, 1364:23, 1364:24, 1365:9, 1365:17, 1366:2, 1366:8, 1366:12, 1366:19, 1367:2, 1367:7, 1367:15, 1368:14, 1368:15, 1368:23, 1368:24, 1369:22

MS [15] - 1163:21, 1164:15, 1236:21, 1237:7, 1253:21, 1254:2, 1254:5, 1254:18, 1360:14, 1361:1, 1361:8, 1369:24, 1370:3, 1371:1, 1371:9

MSCI [1] - 1201:15

multiple [4] - 1201:17, 1249:10, 1291:10, 1358:6

must [2] - 1195:9, 1202:22

MYERS [1] - 1155:6

name [3] - 1188:7, 1265:22, 1266:15

named [1] - 1188:3

names [1] - 1247:16

narration [1] - 1230:19

narrator [2] - 1207:3, 1207:7

nature [1] - 1334:6

navigation [1] - 1301:6

Nawrocki [2] - 1273:22, 1275:24

necessarily [7] - 1208:19, 1208:24, 1228:17, 1245:11, 1296:22, 1303:8, 1305:20

necessary [3] - 1184:20, 1206:20, 1274:22

need [16] - 1156:22, 1164:11, 1182:10, 1182:11, 1226:8, 1232:13, 1239:11, 1241:13, 1259:12, 1361:12, 1364:15, 1365:15, 1367:10, 1367:11, 1369:6, 1369:21

needed [5] - 1177:2, 1222:18, 1222:22,

1223:10, 1315:24
negotiating [1] - 1295:18
negotiation [36] - 1157:19, 1157:20, 1158:4, 1158:9, 1158:11, 1158:16, 1159:7, 1159:22, 1160:1, 1160:6, 1274:13, 1274:22, 1279:8, 1279:12, 1279:21, 1280:5, 1280:14, 1280:19, 1283:21, 1284:4, 1286:24, 1288:10, 1288:17, 1295:19, 1295:22, 1296:3, 1296:18, 1312:18, 1312:19, 1312:24, 1322:9, 1323:21, 1325:1, 1334:7, 1334:11, 1354:2
negotiations [2] - 1158:23, 1159:21
Neilsen [1] - 1268:22
Netflix [1] - 1268:24
network [3] - 1175:7, 1202:24, 1219:10
networking [3] - 1202:5, 1217:19, 1219:6
networks [1] - 1175:4
never [4] - 1251:4, 1258:5, 1343:1, 1353:15
nevertheless [2] - 1182:10, 1314:9
new [3] - 1185:3, 1249:16, 1260:21
New [1] - 1372:2
NewEgg [1] - 1268:24
next [54] - 1164:19, 1171:14, 1176:16, 1194:9, 1196:19, 1204:4, 1206:9, 1208:2, 1216:4, 1223:23, 1225:5, 1225:6, 1230:8, 1254:21, 1265:14, 1280:10, 1284:19, 1284:21, 1285:5, 1285:8, 1286:7, 1288:1, 1288:3, 1288:5, 1289:8, 1289:10, 1299:19, 1299:21, 1301:12, 1301:14, 1307:7, 1307:9, 1310:12, 1310:14, 1310:20, 1312:5, 1312:7,

1314:1, 1314:15, 1315:22, 1317:2, 1317:4, 1317:21, 1318:2, 1318:17, 1320:5, 1320:7, 1321:8, 1321:10, 1321:18, 1321:20, 1322:10, 1322:12, 1322:18
NICHOLS [1] - 1155:4
night [3] - 1157:12, 1160:15, 1168:10
nine [3] - 1214:18, 1214:20, 1269:17
ninety [1] - 1189:18
nodes [12] - 1229:21, 1232:1, 1232:3, 1232:10, 1233:21, 1250:24, 1252:15, 1253:7, 1367:24, 1368:1
Nokia [2] - 1287:14
non [7] - 1238:5, 1288:21, 1289:3, 1289:6, 1322:1, 1323:5, 1324:23
non-exclusive [6] - 1288:21, 1289:3, 1289:6, 1322:1, 1323:5, 1324:23
non-infringement [1] - 1238:5
noncompetitor [1] - 1281:19
none [3] - 1232:3, 1253:22, 1348:14
nonexclusive [14] - 1159:1, 1159:5, 1283:16, 1283:23, 1284:1, 1284:7, 1284:8, 1285:24, 1288:9, 1311:1, 1346:6, 1346:9, 1346:15, 1346:17
normal [1] - 1334:17
normally [1] - 1165:19
Northern [1] - 1269:21
Notary [1] - 1372:8
note [3] - 1196:15, 1200:11, 1359:7
notebook [7] - 1166:10, 1186:21, 1191:8, 1196:11, 1201:1, 1206:11, 1219:14
notebooks [1] - 1186:6
noted [4] - 1162:19, 1163:14, 1166:4, 1298:20

notes [2] - 1166:4, 1372:11
nothing [6] - 1161:2, 1226:22, 1250:13, 1257:18, 1258:9, 1369:22
noticed [1] - 1199:15
notion [1] - 1346:2
notwithstanding [1] - 1160:23
novel [1] - 1249:16
number [20] - 1156:20, 1157:21, 1166:10, 1218:12, 1236:10, 1250:3, 1259:5, 1283:1, 1292:5, 1302:19, 1303:11, 1304:4, 1304:7, 1309:18, 1318:3, 1318:21, 1330:3, 1333:14, 1335:2, 1345:7
Number [1] - 1350:1
numbered [1] - 1231:5
numbers [8] - 1163:9, 1164:1, 1231:11, 1304:21, 1316:7, 1316:13, 1317:15, 1322:20
numerical [1] - 1166:1
o'clock [4] - 1167:1, 1167:13, 1365:16, 1365:23
O'MELVENY [1] - 1155:6
Oakland [1] - 1269:24
oath [3] - 1168:1, 1266:4, 1367:13
object [5] - 1220:2, 1261:1, 1289:21, 1292:4, 1363:21
objected [1] - 1186:11
objection [21] - 1188:8, 1188:14, 1236:21, 1237:7, 1251:8, 1251:10, 1251:11, 1251:23, 1252:3, 1254:8, 1254:12, 1254:13, 1254:18, 1265:8, 1265:10, 1291:21, 1293:10, 1293:16, 1293:18, 1355:15, 1364:17
objections [4] - 1156:10, 1156:11, 1355:13, 1364:21
objective [1] - 1173:18
objects [1] - 1206:2
observer's [1] -

1176:9
obtain [1] - 1178:5
obtained [2] - 1224:15, 1323:15
obtaining [1] - 1177:15
obvious [17] - 1169:12, 1169:19, 1179:10, 1179:15, 1181:12, 1181:18, 1183:10, 1184:5, 1184:8, 1185:13, 1185:16, 1185:22, 1206:7, 1207:17, 1213:6, 1228:2, 1359:23
obviousness [10] - 1169:14, 1184:20, 1186:12, 1359:4, 1359:9, 1359:16, 1359:19, 1360:2, 1360:8, 1370:8
occasion [2] - 1193:20, 1214:20
occasions [1] - 1213:15
occur [3] - 1157:21, 1334:16, 1334:22
occurred [15] - 1158:3, 1158:10, 1159:3, 1159:8, 1159:12, 1159:15, 1172:14, 1203:16, 1246:9, 1247:17, 1334:3, 1334:4, 1334:24, 1336:14, 1345:9
occurring [3] - 1157:20, 1158:9, 1325:1
occurs [2] - 1174:17, 1207:20
OF [2] - 1154:2, 1372:5
offer [9] - 1158:1, 1158:24, 1159:5, 1324:15, 1329:8, 1337:15, 1339:10, 1340:1, 1340:3
offered [8] - 1160:20, 1214:18, 1327:15, 1338:14, 1338:18, 1338:21, 1339:2, 1339:15
offering [1] - 1339:19
offers [1] - 1322:5
office [5] - 1198:9, 1213:8, 1213:13, 1267:3, 1273:9
Office [4] - 1188:2,

1188:6, 1188:12, 1212:21
offices [1] - 1267:2
often [4] - 1233:15, 1234:7, 1303:7, 1358:24
oil [1] - 1269:8
once [11] - 1176:16, 1179:11, 1182:21, 1211:10, 1214:19, 1225:1, 1245:8, 1269:9, 1303:18, 1304:2, 1350:24
one [121] - 1156:20, 1157:4, 1157:23, 1159:1, 1159:4, 1160:14, 1162:5, 1166:10, 1167:2, 1169:19, 1170:13, 1171:3, 1172:12, 1172:16, 1172:22, 1173:6, 1173:12, 1178:14, 1179:15, 1183:7, 1183:10, 1184:8, 1184:23, 1190:18, 1192:12, 1199:15, 1202:8, 1203:23, 1206:7, 1210:22, 1214:1, 1214:12, 1214:20, 1217:6, 1219:23, 1223:13, 1225:13, 1226:2, 1227:12, 1227:24, 1239:7, 1245:1, 1245:15, 1246:19, 1251:12, 1255:21, 1256:7, 1256:12, 1256:19, 1257:7, 1257:8, 1257:18, 1258:7, 1259:19, 1263:8, 1269:17, 1269:22, 1270:9, 1274:11, 1277:5, 1277:8, 1277:10, 1283:7, 1283:17, 1285:14, 1289:4, 1290:14, 1291:11, 1294:10, 1295:4, 1295:6, 1295:7, 1295:13, 1296:4, 1297:1, 1299:17, 1299:24, 1300:8, 1302:4, 1302:6, 1302:9, 1302:16, 1304:5, 1305:8, 1306:16, 1307:12, 1307:15, 1308:2, 1311:2, 1311:17, 1312:21, 1314:15, 1314:23,

1316:21, 1320:22, 1323:9, 1323:11, 1324:5, 1325:4, 1325:6, 1328:15, 1332:9, 1332:11, 1332:18, 1335:18, 1336:1, 1336:2, 1339:19, 1344:21, 1346:18, 1350:17, 1350:22, 1351:1, 1359:5, 1359:17, 1362:15, 1363:14, 1363:18, 1364:4, 1364:10

one's [1] - 1316:16
one-year [2] - 1172:16, 1172:22
ones [2] - 1172:9, 1345:13
ongoing [1] - 1332:4
onwards [1] - 1258:10
open [1] - 1193:16
opened [1] - 1333:20
operate [1] - 1299:5
operates [2] - 1229:15, 1245:23
operation [3] - 1241:8, 1241:9, 1252:9
opined [1] - 1337:20
opinion [67] - 1169:15, 1171:9, 1172:3, 1172:17, 1172:24, 1173:15, 1174:11, 1175:16, 1175:22, 1176:5, 1177:3, 1177:6, 1177:20, 1180:1, 1180:12, 1181:17, 1182:13, 1183:2, 1183:9, 1185:12, 1185:19, 1190:16, 1190:18, 1200:2, 1200:4, 1211:9, 1213:12, 1213:15, 1214:5, 1214:15, 1214:18, 1214:20, 1214:22, 1214:24, 1216:13, 1230:2, 1232:20, 1233:1, 1238:16, 1243:22, 1244:8, 1244:19, 1244:22, 1245:6, 1246:13, 1246:24, 1247:24, 1249:16, 1265:17, 1271:8, 1274:9, 1274:15, 1276:6, 1276:12, 1283:23, 1284:12, 1285:21, 1286:5, 1286:17, 1293:6,

1293:7, 1323:20, 1337:9, 1337:15, 1338:7, 1344:11, 1352:18
opinions [12] - 1185:24, 1187:21, 1228:23, 1236:19, 1244:24, 1246:21, 1247:11, 1271:24, 1274:3, 1292:24, 1357:23, 1358:7
opportunity [2] - 1241:24, 1261:1
opposed [1] - 1347:18
option [4] - 1284:4, 1302:11, 1308:11, 1340:10
oral [1] - 1328:22
order [9] - 1156:17, 1165:7, 1166:1, 1167:6, 1197:11, 1227:4, 1243:11, 1271:21, 1359:5
orders [1] - 1231:18
ordinary [18] - 1169:19, 1169:23, 1170:2, 1170:14, 1171:3, 1179:16, 1179:21, 1181:19, 1183:10, 1184:9, 1206:8, 1223:13, 1223:19, 1225:3, 1227:12, 1227:19, 1227:24, 1359:23
organize [1] - 1165:23
organized [2] - 1178:18, 1228:5
orient [1] - 1168:14
original [3] - 1288:13, 1288:23, 1340:5
otherwise [3] - 1277:10, 1296:11, 1310:9
outcome [1] - 1273:24
outs [1] - 1156:23
outset [1] - 1195:22
outside [1] - 1156:19
overall [1] - 1173:18
overlook [1] - 1174:6
overruled [4] - 1188:10, 1188:16, 1188:19, 1290:1
overview [2] - 1200:15, 1202:8
own [3] - 1235:16, 1248:24, 1315:2
owner [1] - 1311:22
p.m [3] - 1356:6, 1366:22, 1371:15
Pacific [16] - 1278:10,

1278:11, 1278:20, 1280:20, 1286:19, 1288:2, 1288:3, 1289:8, 1299:20, 1301:13, 1307:7, 1310:12, 1322:3, 1333:9, 1336:12, 1344:3
package [1] - 1263:9
page [27] - 1191:19, 1196:19, 1201:3, 1202:7, 1202:14, 1203:18, 1206:12, 1208:3, 1208:5, 1212:7, 1212:8, 1216:4, 1216:5, 1216:22, 1216:23, 1219:18, 1220:11, 1220:16, 1220:21, 1221:1, 1231:10, 1264:13, 1264:15, 1283:10, 1350:15, 1366:14
Page [7] - 1194:15, 1212:15, 1215:11, 1215:15, 1215:18, 1215:19, 1216:18
Pages [1] - 1372:10
pages [6] - 1163:13, 1201:4, 1201:6, 1202:7, 1203:17, 1220:11
pagination [1] - 1215:16
paid [34] - 1189:11, 1243:8, 1273:3, 1273:4, 1274:9, 1274:12, 1289:10, 1290:15, 1294:4, 1294:11, 1297:5, 1297:21, 1298:2, 1298:4, 1298:7, 1298:8, 1298:13, 1299:9, 1299:13, 1299:15, 1303:16, 1311:12, 1323:24, 1331:20, 1331:23, 1332:1, 1334:2, 1334:11, 1335:15, 1345:16
Panasonic [1] - 1269:1
paper [23] - 1157:21, 1173:16, 1174:12, 1176:5, 1177:6, 1177:20, 1193:12, 1194:11, 1194:16, 1196:20, 1200:15, 1200:19, 1201:1, 1201:4, 1201:9,

1201:13, 1201:24, 1204:10, 1217:24, 1219:1, 1219:4, 1219:23, 1268:12
papers [1] - 1268:8
paragraph [4] - 1191:23, 1195:23, 1196:1, 1201:9
parallel [1] - 1204:6
parameters [5] - 1176:14, 1176:24, 1222:14, 1223:5, 1223:7
pardon [2] - 1175:19, 1256:15
parse [2] - 1346:11, 1346:12
parsed [1] - 1346:14
part [41] - 1161:24, 1169:22, 1173:10, 1173:14, 1175:18, 1193:23, 1207:24, 1208:1, 1208:15, 1209:3, 1210:8, 1211:7, 1211:10, 1211:12, 1221:19, 1231:21, 1233:10, 1263:9, 1275:23, 1282:9, 1282:13, 1282:15, 1282:16, 1297:11, 1298:16, 1301:11, 1306:18, 1306:19, 1309:5, 1323:1, 1333:17, 1340:5, 1348:18, 1348:21, 1348:23, 1350:7, 1351:21, 1352:1, 1352:2, 1358:1, 1361:9
partial [1] - 1318:7
particular [13] - 1170:11, 1175:13, 1183:9, 1234:22, 1236:1, 1247:15, 1291:17, 1295:4, 1301:16, 1302:3, 1312:12, 1329:13, 1369:13
particularly [3] - 1247:4, 1252:21, 1364:9
parties [27] - 1158:24, 1161:1, 1163:3, 1170:1, 1272:4, 1279:12, 1279:24, 1281:17, 1282:11, 1284:20, 1285:6, 1286:4, 1286:20, 1288:11, 1295:19, 1296:14, 1296:19,

1296:22, 1299:24, 1322:4, 1322:8, 1323:23, 1325:6, 1336:7, 1336:19, 1346:18, 1371:12
parties' [2] - 1254:8, 1299:10
partner [1] - 1174:2
partridge [1] - 1364:1
PARTRIDGE [17] - 1154:21, 1156:5, 1157:3, 1165:19, 1166:17, 1356:11, 1356:22, 1357:2, 1357:7, 1362:8, 1363:14, 1363:23, 1364:24, 1365:9, 1365:17, 1366:2, 1369:22
parts [1] - 1178:10
party [3] - 1160:24, 1287:23, 1331:16
pass [4] - 1186:4, 1249:3, 1325:13, 1368:14
past [2] - 1166:21, 1212:9
patent [145] - 1160:18, 1168:17, 1169:12, 1169:17, 1170:11, 1170:15, 1171:1, 1172:11, 1172:19, 1172:21, 1173:8, 1181:4, 1181:7, 1181:13, 1181:16, 1181:24, 1182:15, 1183:4, 1183:14, 1183:20, 1183:24, 1184:4, 1184:5, 1184:8, 1184:15, 1185:7, 1185:15, 1186:1, 1189:22, 1190:3, 1190:15, 1193:13, 1198:9, 1206:5, 1206:16, 1207:20, 1209:16, 1211:22, 1212:7, 1212:16, 1212:22, 1213:7, 1213:8, 1213:12, 1214:15, 1214:21, 1215:3, 1216:2, 1216:11, 1224:2, 1227:24, 1229:6, 1229:15, 1243:19, 1245:2, 1247:13, 1249:8, 1249:15, 1249:19, 1249:21, 1262:4, 1262:7, 1262:21, 1262:22, 1263:10,

1265:18, 1268:4, 1269:14, 1269:15, 1270:6, 1270:10, 1270:15, 1271:5, 1272:11, 1274:10, 1274:12, 1275:5, 1275:6, 1276:13, 1276:16, 1277:4, 1277:9, 1277:17, 1280:8, 1280:9, 1281:2, 1281:22, 1282:7, 1283:11, 1283:18, 1284:12, 1284:16, 1284:23, 1285:12, 1285:15, 1285:21, 1285:22, 1285:24, 1286:15, 1287:9, 1287:24, 1288:13, 1290:7, 1291:10, 1291:11, 1293:21, 1294:16, 1295:4, 1295:13, 1295:15, 1296:5, 1296:7, 1296:8, 1296:15, 1296:23, 1298:9, 1298:21, 1299:17, 1307:13, 1311:2, 1311:22, 1320:9, 1320:19, 1321:6, 1324:16, 1324:20, 1324:22, 1325:8, 1325:9, 1331:15, 1332:6, 1332:20, 1333:5, 1344:9, 1344:15, 1354:4, 1359:2, 1370:18

Patent [21] - 1176:7, 1177:19, 1178:9, 1179:2, 1179:10, 1180:3, 1180:15, 1188:1, 1188:6, 1188:12, 1190:23, 1212:20, 1217:4, 1271:10, 1276:1, 1290:8, 1290:24, 1296:18, 1328:18, 1370:7, 1370:21

patent-related [1] - 1320:9

patented [3] - 1281:9, 1311:21, 1336:9

patentholder [3] - 1186:18, 1277:11, 1277:13

patenting [1] - 1358:17

patents [9] - 1198:12, 1214:23, 1249:7, 1289:16, 1294:17,

1294:18, 1298:20, 1333:1, 1345:1

Pavel [2] - 1261:20, 1264:14

pay [19] - 1285:14, 1291:19, 1294:2, 1294:15, 1298:7, 1308:19, 1309:1, 1309:15, 1309:16, 1332:9, 1332:18, 1339:20, 1340:1, 1340:2, 1340:8, 1340:11, 1340:17, 1340:19, 1342:9

paying [2] - 1299:8, 1331:16

payment [18] - 1274:11, 1332:3, 1332:4, 1334:8, 1334:15, 1334:22, 1335:5, 1335:7, 1335:8, 1335:12, 1335:16, 1335:18, 1335:20, 1335:22, 1336:1, 1336:2, 1336:3

payments [2] - 1298:10, 1319:9

PC [1] - 1195:20

people [17] - 1162:23, 1166:19, 1175:8, 1197:23, 1217:15, 1256:22, 1257:13, 1303:6, 1303:16, 1303:24, 1304:4, 1305:18, 1332:23, 1333:4, 1340:2, 1340:6, 1340:11

per [5] - 1273:5, 1318:24, 1338:8, 1343:24

perceive [2] - 1252:13, 1252:16

perceived [2] - 1181:15, 1206:4

perceives [1] - 1252:10

percent [38] - 1157:24, 1159:1, 1189:18, 1258:8, 1258:17, 1283:18, 1289:3, 1289:5, 1304:6, 1306:4, 1311:2, 1311:8, 1311:9, 1314:9, 1318:2, 1318:5, 1318:8, 1318:11, 1318:14, 1321:4, 1321:12, 1321:16, 1322:2, 1322:5, 1322:6,

1322:16, 1322:18, 1322:19, 1323:4, 1324:22, 1325:7, 1329:13, 1330:2, 1337:21, 1337:24, 1344:21

percentage [1] - 1303:21

perfect [1] - 1365:18

perfection [1] - 1166:18

perform [2] - 1181:20, 1244:20

performance [2] - 1220:3, 1362:17

performed [11] - 1203:8, 1248:20, 1251:14, 1251:17, 1251:22, 1252:6, 1297:2, 1366:11, 1366:17, 1367:18

performer [2] - 1176:13, 1222:13

perhaps [4] - 1284:23, 1303:18, 1320:24, 1346:12

period [37] - 1159:7, 1172:12, 1172:15, 1172:16, 1172:22, 1274:18, 1274:20, 1274:23, 1280:16, 1280:17, 1286:21, 1287:2, 1288:16, 1295:16, 1295:17, 1297:24, 1302:5, 1302:23, 1305:11, 1312:12, 1312:14, 1312:15, 1312:23, 1313:1, 1314:20, 1316:17, 1317:14, 1317:22, 1318:1, 1318:6, 1325:6, 1334:9, 1334:20, 1335:4, 1336:3, 1336:4, 1338:18

periods [2] - 1316:16, 1317:18

permissible [1] - 1358:8

person [11] - 1169:23, 1170:1, 1170:3, 1179:21, 1184:13, 1184:16, 1184:21, 1188:7, 1223:19, 1227:19, 1359:23

personal [1] - 1216:13

personally [2] - 1179:20, 1215:3

petabyte [2] - 1195:10, 1197:7

Peter [11] - 1234:6, 1234:17, 1234:24, 1235:1, 1235:4, 1235:10, 1235:14, 1235:18, 1236:4, 1245:9, 1245:11

PH.D [1] - 1266:2

Ph.D [2] - 1267:13, 1267:18

phrase [5] - 1176:24, 1209:20, 1210:8, 1210:10, 1229:12

phrases [1] - 1226:2

picked [1] - 1176:11

pictorial [1] - 1177:12

picture [1] - 1367:23

piece [1] - 1241:14

pieces [1] - 1241:20

piled [1] - 1164:19

piles [1] - 1157:20

pipelining [1] - 1208:11

pipes [1] - 1192:9

pizza [5] - 1332:9, 1332:10, 1332:18, 1332:19

place [5] - 1231:12, 1279:15, 1283:9, 1288:18, 1334:7

placed [3] - 1200:24, 1208:14, 1240:4

places [3] - 1162:20, 1163:1, 1174:18

Plaintiff [10] - 1154:4, 1154:24, 1253:22, 1254:16, 1254:23, 1270:17, 1270:20, 1274:24, 1369:23, 1370:18

plaintiff [2] - 1162:6, 1281:17

plaintiff's [2] - 1160:15, 1367:6

Plaintiff's [12] - 1166:1, 1194:8, 1211:24, 1219:13, 1230:8, 1240:3, 1254:15, 1285:2, 1285:16, 1349:24, 1353:7, 1357:12

plaintiffs [1] - 1250:14

Plaintiffs [2] - 1191:5, 1360:15

plan [1] - 1339:24

planes [1] - 1300:19

Planet [1] - 1219:21

platform [1] - 1305:18

played [4] - 1171:16, 1198:2, 1200:7,

playing [2] - 1255:4, 1261:14

plurality [1] - 1174:9

plus [3] - 1324:13, 1347:13, 1368:5

Plus [13] - 1302:11, 1303:2, 1303:13, 1304:11, 1304:19, 1304:20, 1304:23, 1305:1, 1313:7, 1339:16, 1341:5

point [22] - 1174:21, 1182:17, 1205:22, 1207:16, 1215:18, 1216:15, 1237:22, 1242:10, 1246:19, 1281:2, 1290:22, 1291:22, 1313:7, 1314:3, 1317:13, 1329:13, 1342:9, 1345:2, 1346:20, 1361:17, 1370:24

pointed [3] - 1233:17, 1247:10, 1345:13

pointing [1] - 1341:22

points [5] - 1174:2, 1330:22, 1337:3, 1338:2, 1346:12

policy [1] - 1280:24

polygon [1] - 1180:21

polygons [1] - 1180:22

POOL [1] - 1154:3

pop [1] - 1348:20

popped [1] - 1313:14

popular [1] - 1303:17

popularity [2] - 1301:16, 1303:4

portfolio [1] - 1285:13

portion [10] - 1209:21, 1211:1, 1211:11, 1233:21, 1299:23, 1304:5, 1314:19, 1315:5, 1315:9, 1316:24

portions [1] - 1315:6

poses [1] - 1191:14

position [11] - 1175:15, 1176:9, 1176:14, 1176:17, 1177:1, 1222:15, 1223:5, 1238:5, 1241:22, 1360:21, 1360:24

positions [3] - 1321:15, 1324:9, 1360:3

possibility [3] - 1252:18, 1262:3, 1337:14

possible [5] - 1163:8, 1194:23, 1207:18, 1321:14, 1340:9
possibly [1] - 1170:13
post [1] - 1164:12
post-trial [1] - 1164:12
potential [2] - 1181:21, 1281:1
potentially [3] - 1285:11, 1287:18, 1294:19
powerful [1] - 1185:3
practical [1] - 1233:22
practice [1] - 1238:17
practices [1] - 1166:21
pre [8] - 1206:20, 1207:4, 1207:13, 1207:17, 1207:21, 1335:11, 1359:5, 1359:17
pre-fetch [1] - 1206:20
pre-fetching [4] - 1207:4, 1207:13, 1207:17, 1207:21
pre-judgement [1] - 1335:11
pre-trial [2] - 1359:5, 1359:17
preamble [4] - 1173:15, 1173:16, 1173:17, 1357:16
precedent [1] - 1161:18
precise [3] - 1179:12, 1179:13, 1214:17
precisely [1] - 1214:11
predecessor [1] - 1275:16
predecessors [1] - 1287:10
predict [1] - 1207:18
predicting [2] - 1207:3, 1207:14
prediction [1] - 1207:5
prefer [2] - 1255:15, 1338:4
preference [1] - 1298:23
preferred [1] - 1298:1
prejudicial [2] - 1161:24, 1188:17
premised [1] - 1359:20
preparatory [1] - 1201:5
prepared [13] - 1172:2, 1234:17, 1234:20, 1235:10, 1235:13, 1235:20,

1235:22, 1245:9, 1245:11, 1245:12, 1245:17, 1245:19, 1267:4
preparing [1] - 1352:17
present [8] - 1246:24, 1250:24, 1253:7, 1323:6, 1330:5, 1330:8, 1347:21, 1358:19
presentation [2] - 1230:12, 1247:15
presentations [1] - 1268:8
presented [17] - 1178:23, 1234:11, 1236:19, 1240:12, 1328:19, 1347:10, 1347:18, 1347:19, 1347:20, 1347:24, 1352:11, 1359:12, 1360:17, 1360:23, 1369:17, 1370:12, 1370:22
presenting [2] - 1248:22, 1301:7
President [5] - 1193:15, 1193:18, 1193:24, 1194:4, 1194:23
presumption [1] - 1296:13
pretend [1] - 1226:20
pretrial [1] - 1156:17
pretty [3] - 1166:21, 1197:24, 1241:16
preview [1] - 1361:19
previous [11] - 1192:1, 1192:3, 1192:24, 1193:6, 1213:14, 1221:8, 1232:15, 1269:5, 1270:6, 1316:22, 1371:2
previously [2] - 1289:22, 1355:22
price [4] - 1284:24, 1285:13, 1286:11, 1286:14
primarily [1] - 1248:16
primary [5] - 1171:7, 1173:6, 1185:20, 1257:21, 1258:11
principal [2] - 1200:16, 1308:2
principally [2] - 1268:3, 1326:21
principles [1] - 1311:15
printed [1] - 1359:13

prioritization [1] - 1232:6
prioritizing [1] - 1368:1
Pro [16] - 1302:12, 1303:2, 1303:14, 1303:15, 1304:11, 1304:23, 1305:1, 1305:8, 1313:8, 1313:10, 1316:2, 1339:16, 1341:5, 1341:19, 1341:20, 1342:4
pro [3] - 1167:4, 1167:7, 1167:15
problem [10] - 1158:5, 1163:15, 1165:15, 1166:14, 1166:17, 1195:16, 1195:17, 1195:19, 1325:18, 1325:20
problems [1] - 1193:11
procedure [1] - 1363:21
Procedure [1] - 1370:5
proceed [4] - 1173:2, 1187:1, 1192:15, 1266:6
proceeding [3] - 1160:20, 1160:24, 1161:4
proceeds [1] - 1363:10
process [28] - 1166:19, 1173:5, 1177:23, 1178:21, 1191:4, 1196:9, 1207:18, 1216:12, 1227:10, 1229:10, 1230:6, 1231:22, 1232:7, 1241:6, 1246:4, 1246:8, 1246:23, 1249:11, 1249:13, 1249:15, 1249:18, 1249:21, 1250:23, 1252:23, 1253:6, 1253:11, 1253:15, 1253:16
prodcuts [1] - 1294:19
produced [3] - 1185:2, 1272:3, 1289:15
product [29] - 1259:1, 1263:11, 1263:14, 1263:17, 1274:14, 1277:8, 1281:9, 1281:21, 1281:23, 1287:13, 1294:22, 1296:17, 1301:17,

1301:20, 1303:4, 1303:17, 1304:10, 1304:14, 1307:12, 1308:14, 1309:11, 1310:3, 1313:8, 1339:19, 1339:21, 1340:1, 1340:3, 1340:14, 1351:11
production [2] - 1245:24, 1246:6
products [35] - 1229:7, 1229:22, 1229:24, 1232:5, 1232:8, 1236:6, 1236:11, 1236:15, 1237:24, 1239:8, 1241:9, 1243:23, 1248:16, 1249:8, 1271:7, 1275:12, 1275:21, 1276:14, 1291:16, 1294:17, 1295:3, 1295:9, 1302:1, 1302:3, 1307:13, 1307:18, 1309:12, 1316:13, 1324:19, 1340:23, 1352:20, 1354:8, 1354:9, 1357:20, 1364:12
professor [1] - 1216:9
professors [1] - 1266:24
proffered [1] - 1231:18
profit [1] - 1319:22
profitability [1] - 1301:16
profits [5] - 1270:12, 1277:2, 1277:14, 1277:15, 1299:23
program [3] - 1267:14, 1267:19, 1282:13
project [8] - 1200:16, 1202:9, 1202:19, 1203:13, 1259:1, 1262:18, 1359:7, 1359:13
projects [1] - 1173:22
promote [2] - 1304:21, 1339:15
promotes [1] - 1310:2
promotional [2] - 1341:17, 1354:9
proof [1] - 1186:18
proper [3] - 1320:10, 1321:16, 1337:16
property [6] - 1198:15, 1266:18, 1268:4, 1268:9, 1268:11, 1291:12

proposal [6] - 1165:17, 1195:1, 1195:24, 1282:22, 1288:24, 1310:23
propose [1] - 1165:4
proposed [1] - 1157:8
proposing [1] - 1157:5
prorate [1] - 1336:3
prototype [1] - 1220:1
prove [1] - 1359:12
provide [6] - 1174:9, 1187:21, 1190:4, 1232:17, 1241:24, 1246:24
provided [15] - 1164:4, 1191:8, 1196:11, 1199:23, 1212:2, 1213:12, 1214:24, 1219:15, 1233:17, 1268:19, 1284:3, 1300:7, 1315:2, 1320:16, 1344:19
provides [3] - 1272:4, 1299:6, 1354:9
providing [7] - 1214:15, 1247:23, 1248:12, 1295:1, 1302:23, 1319:24, 1344:20
Ptab [1] - 1160:24
PTO's [1] - 1161:9
PTX [13] - 1231:9, 1265:7, 1285:4, 1285:17, 1285:19, 1302:18, 1309:21, 1309:23, 1355:11, 1355:12
PTX-0342 [1] - 1319:13
PTX-380 [1] - 1254:10
PTX-381 [1] - 1254:10
PTX-387 [1] - 1254:10
PTX-55 [1] - 1333:13
Public [1] - 1372:9
public [5] - 1319:16, 1358:12, 1358:15, 1358:22, 1358:24
publication [61] - 1171:13, 1172:14, 1172:18, 1173:1, 1173:7, 1173:21, 1174:19, 1174:21, 1175:5, 1175:16, 1175:18, 1175:23, 1176:12, 1176:18, 1176:20, 1176:23, 1177:14, 1178:3, 1178:8, 1178:11,

1179:1, 1179:4,
1179:9, 1179:14,
1179:24, 1180:2,
1180:6, 1180:13,
1180:17, 1181:3,
1181:8, 1181:12,
1181:16, 1181:23,
1182:14, 1182:18,
1183:3, 1183:8,
1183:13, 1184:3,
1184:7, 1184:14,
1185:8, 1185:10,
1185:13, 1185:15,
1203:13, 1211:20,
1212:12, 1213:2,
1219:8, 1219:12,
1220:8, 1222:9,
1224:2, 1224:6,
1225:23, 1227:23,
1358:5, 1359:14,
1370:14
published [4] -
1191:10, 1193:21,
1194:14, 1195:4
pull [3] - 1239:10,
1349:24, 1351:13
pulled [2] - 1238:3,
1240:7
purchase [1] -
1324:15
purchases [1] -
1311:20
purchasing [2] -
1303:1, 1341:19
purple [1] - 1250:4
purpose [6] - 1173:18,
1257:21, 1258:11,
1258:12, 1258:13,
1362:1
purposes [11] -
1164:12, 1211:15,
1297:12, 1309:22,
1318:11, 1335:10,
1335:22, 1336:11,
1352:6, 1357:10,
1361:17
pursuant [1] - 1370:4
put [32] - 1162:10,
1162:16, 1165:5,
1165:20, 1165:24,
1190:3, 1196:6,
1201:8, 1204:20,
1206:9, 1209:11,
1215:7, 1220:7,
1221:24, 1223:23,
1229:1, 1238:22,
1245:22, 1279:15,
1292:3, 1292:4,
1292:9, 1292:22,
1322:12, 1332:7,

1351:6, 1361:20,
1361:22, 1362:22,
1363:3, 1370:17,
1371:3
putting [6] - 1158:8,
1198:22, 1208:22,
1238:21, 1246:10,
1363:1
quadrant [1] - 1180:5
Quadtree [4] -
1182:22, 1228:5,
1228:12, 1228:17
quadtree [4] -
1178:17, 1178:18,
1180:8, 1180:10
qualified [2] -
1187:20, 1268:14
quality [5] - 1232:7,
1239:22, 1240:11,
1240:15, 1240:16
quantifies [1] - 1234:4
quantify [1] - 1234:1
quarter [1] - 1356:1
questioning [1] -
1163:23
questionnaire [1] -
1164:4
questions [23] -
1192:12, 1192:13,
1192:20, 1213:3,
1249:6, 1250:11,
1250:16, 1250:18,
1252:3, 1252:4,
1253:20, 1262:11,
1352:13, 1354:14,
1354:16, 1354:19,
1354:21, 1361:23,
1362:4, 1362:9,
1368:15, 1368:20,
1368:21
quick [1] - 1167:2
quite [8] - 1173:9,
1175:17, 1281:7,
1299:3, 1299:4,
1300:16, 1320:3,
1357:23
quotation [3] -
1176:11, 1207:8,
1209:8
R-E-E-D [1] - 1265:24
raise [3] - 1156:2,
1156:3, 1162:15
raised [4] - 1161:12,
1161:14, 1260:24,
1290:23
ran [1] - 1367:23
range [5] - 1272:2,
1283:17, 1285:1,
1311:1, 1322:2
ranges [2] - 1166:9

1325:9
rapidly [1] - 1252:24
rate [20] - 1252:11,
1269:10, 1273:5,
1283:17, 1284:15,
1310:18, 1311:1,
1311:9, 1320:10,
1321:20, 1321:22,
1322:1, 1322:6,
1322:19, 1323:5,
1324:22, 1325:7,
1337:16, 1337:24,
1344:21
rather [11] - 1193:2,
1210:16, 1210:18,
1210:24, 1211:7,
1211:13, 1219:7,
1233:18, 1233:20,
1323:12, 1356:13
raw [1] - 1216:19
re [2] - 1367:10,
1367:11
re-swear [2] -
1367:10, 1367:11
reached [10] - 1156:7,
1168:15, 1168:23,
1169:8, 1179:8,
1181:1, 1181:10,
1184:1, 1214:4,
1287:20
reaching [4] - 1170:4,
1177:2, 1198:1,
1349:12
read [17] - 1171:2,
1205:11, 1209:22,
1216:7, 1223:11,
1227:20, 1264:19,
1265:3, 1351:3,
1355:3, 1362:10,
1363:16, 1363:17,
1363:18, 1364:1,
1366:6, 1366:12
reader [1] - 1226:13
reading [4] - 1223:18,
1227:1, 1227:18,
1273:18
reads [1] - 1352:2
ready [6] - 1187:1,
1261:5, 1358:17,
1363:12, 1366:20,
1371:11
real [4] - 1220:2,
1220:3, 1258:6,
1336:21
real-object [1] -
1220:2
really [11] - 1169:15,
1214:24, 1258:13,
1262:16, 1279:10,
1281:2, 1281:24,

1307:2, 1308:2,
1310:9
realm [1] - 1156:19
Realtime [2] -
1220:23, 1221:18
reason [10] - 1162:8,
1162:13, 1164:7,
1164:10, 1164:13,
1198:17, 1242:5,
1298:16, 1306:24,
1307:4
reasonable [39] -
1248:24, 1270:7,
1270:11, 1270:14,
1274:6, 1274:8,
1274:16, 1275:9,
1275:11, 1276:24,
1277:2, 1277:21,
1277:23, 1278:2,
1278:8, 1278:17,
1279:2, 1279:6,
1280:2, 1284:9,
1286:22, 1294:14,
1297:4, 1297:7,
1310:16, 1312:6,
1323:18, 1323:23,
1330:19, 1330:22,
1331:1, 1331:2,
1331:20, 1335:6,
1343:21, 1344:2,
1345:24, 1352:6,
1352:8
reasons [5] - 1285:10,
1290:21, 1297:2,
1298:24, 1305:16
rebuttal [10] -
1186:17, 1360:17,
1361:19, 1361:24,
1363:1, 1363:6,
1363:10, 1367:5,
1367:6, 1367:8
recap [1] - 1168:8
received [2] - 1262:20,
1328:14
recent [1] - 1275:18
recess [3] - 1260:17,
1356:24, 1371:11
recited [1] - 1233:7
recognizable [4] -
1226:12, 1227:3,
1227:6, 1228:13
recognize [1] -
1171:10
recollection [4] -
1160:18, 1247:14,
1349:22, 1350:13
record [21] - 1162:24,
1163:5, 1163:19,
1164:2, 1164:6,
1164:11, 1164:12,

1170:20, 1183:16,
1199:5, 1225:19,
1260:5, 1265:22,
1293:10, 1293:11,
1293:20, 1309:22,
1355:4, 1364:19,
1371:13, 1372:9
rectangles [1] -
1224:10
red [1] - 1222:3
redirect [3] - 1221:11,
1238:12, 1242:1
REDIRECT [2] -
1249:4, 1352:15
redo [1] - 1159:16
REED [1] - 1266:2
Reed [50] - 1159:13,
1162:7, 1259:20,
1260:2, 1260:8,
1260:10, 1261:2,
1265:15, 1265:23,
1266:11, 1266:16,
1266:20, 1267:4,
1267:8, 1268:7,
1268:13, 1273:2,
1273:23, 1276:20,
1288:1, 1289:23,
1294:2, 1303:20,
1304:18, 1309:6,
1310:1, 1311:13,
1313:16, 1315:12,
1316:11, 1319:6,
1319:17, 1320:20,
1321:19, 1324:24,
1325:12, 1326:3,
1332:17, 1334:21,
1336:18, 1338:13,
1339:23, 1340:19,
1341:23, 1351:22,
1352:17, 1353:24,
1354:22
Reed's [1] - 1162:13
refer [4] - 1163:10,
1231:8, 1231:9,
1253:9
reference [17] -
1173:6, 1180:5,
1182:19, 1183:8,
1183:21, 1188:5,
1208:4, 1208:22,
1213:1, 1229:14,
1240:10, 1283:23,
1284:12, 1285:21,
1358:4, 1358:9,
1360:9
referenced [2] -
1163:12, 1346:24
references [9] -
1165:3, 1171:7,
1185:20, 1212:17,

1212:19, 1217:7, 1220:17, 1359:11, 1370:12
referral [2] - 1308:20, 1309:1
referred [4] - 1174:3, 1231:2, 1290:11, 1304:18
referring [8] - 1162:21, 1163:4, 1191:22, 1195:17, 1213:14, 1237:11, 1241:6, 1283:3
refers [5] - 1173:21, 1205:21, 1219:9, 1239:21, 1279:7
refining [1] - 1252:23
reflect [3] - 1303:3, 1319:24, 1320:1
reflects [3] - 1306:1, 1306:10, 1322:7
reframe [2] - 1237:12, 1237:14
refresh [1] - 1252:11
refreshed [3] - 1252:9, 1252:12, 1349:22
regard [6] - 1259:20, 1313:24, 1326:15, 1348:4, 1352:24, 1353:16
regarded [1] - 1169:20
regarding [14] - 1168:15, 1172:17, 1175:22, 1180:1, 1181:18, 1182:13, 1185:6, 1228:1, 1263:7, 1278:5, 1305:5, 1323:20, 1327:9, 1347:15
region [1] - 1173:24
Registered [1] - 1372:7
relabel [1] - 1160:5
relate [8] - 1158:23, 1230:22, 1268:21, 1269:1, 1294:19, 1301:15, 1320:2, 1323:19
related [22] - 1173:20, 1173:23, 1174:11, 1224:20, 1272:16, 1272:17, 1283:19, 1284:12, 1284:16, 1290:14, 1290:16, 1291:14, 1291:15, 1291:16, 1291:17, 1294:7, 1294:24, 1311:2, 1311:21, 1320:9, 1324:22, 1325:8

relates [13] - 1185:8, 1185:11, 1221:2, 1299:21, 1307:9, 1308:3, 1311:14, 1311:19, 1314:24, 1316:19, 1318:19, 1345:21, 1353:7
relating [20] - 1171:23, 1268:3, 1268:19, 1281:22, 1286:18, 1287:12, 1287:24, 1291:13, 1300:17, 1300:18, 1300:20, 1301:24, 1309:9, 1311:18, 1313:10, 1313:19, 1314:16, 1320:15, 1333:13, 1333:17
relation [1] - 1168:20
relationship [21] - 1234:23, 1277:6, 1277:17, 1277:20, 1280:23, 1281:7, 1281:17, 1281:20, 1282:1, 1282:3, 1282:14, 1295:5, 1305:7, 1306:17, 1307:11, 1307:14, 1308:3, 1308:6, 1310:7, 1318:12, 1341:17
relatively [3] - 1296:11, 1305:15, 1306:19
released [4] - 1250:23, 1253:5, 1274:14, 1317:23
relevance [3] - 1160:23, 1188:9, 1276:18
relevant [15] - 1158:6, 1158:8, 1166:4, 1172:20, 1177:13, 1196:22, 1223:22, 1276:9, 1278:21, 1279:1, 1284:9, 1314:19, 1334:19, 1336:4, 1346:4
relied [12] - 1200:3, 1200:19, 1200:22, 1219:9, 1235:16, 1260:11, 1289:24, 1292:11, 1297:22, 1316:4, 1324:3, 1327:21
relies [1] - 1293:6
rely [8] - 1176:22, 1217:2, 1248:16, 1292:24, 1293:5, 1306:7, 1326:12,

1326:22
relying [2] - 1327:12, 1328:20
remained [1] - 1313:8
remember [11] - 1185:23, 1188:4, 1188:5, 1189:20, 1198:22, 1199:18, 1199:19, 1218:22, 1347:2, 1351:14, 1356:2
remind [3] - 1168:1, 1182:7, 1298:3
reminder [2] - 1185:18, 1260:19
remove [1] - 1312:2
render [4] - 1179:9, 1181:12, 1184:4, 1185:24
Renderer [2] - 1220:23, 1221:18
renderer [2] - 1221:2, 1221:20
rendering [2] - 1206:21, 1208:12
renders [6] - 1169:11, 1172:18, 1185:13, 1185:16, 1185:22, 1213:6
renew [2] - 1371:2, 1371:5
repeat [20] - 1178:20, 1192:21, 1196:4, 1208:20, 1210:3, 1210:4, 1236:24, 1242:8, 1242:14, 1243:3, 1243:8, 1243:11, 1243:16, 1243:20, 1243:24, 1244:10, 1244:13, 1244:17, 1245:3
repeating [7] - 1178:2, 1209:20, 1210:24, 1211:11, 1243:12, 1245:7, 1275:14
repeats [2] - 1242:16, 1244:5
repetition [1] - 1173:19
replace [1] - 1220:2
report [12] - 1259:23, 1289:18, 1290:3, 1293:3, 1320:15, 1327:13, 1328:10, 1328:21, 1330:9, 1330:10, 1359:7, 1359:13
REPORTER [1] - 1372:5
Reporter [2] - 1372:8

reports [2] - 1272:14, 1330:13
represent [1] - 1328:6
representation [2] - 1177:12, 1246:3
represented [2] - 1306:2, 1306:3
representing [3] - 1177:11, 1178:1, 1344:16
represents [2] - 1318:7, 1334:8
request [3] - 1158:12, 1224:20, 1231:18
requested [1] - 1176:20
requesting [7] - 1177:9, 1177:14, 1177:24, 1207:15, 1231:22, 1364:11, 1368:1
require [1] - 1260:4
required [10] - 1205:9, 1206:21, 1210:12, 1244:13, 1245:2, 1245:4, 1358:16, 1358:18, 1359:1, 1360:5
requirement [4] - 1166:16, 1197:12, 1197:20, 1271:20
requires [2] - 1229:6, 1343:21
research [8] - 1203:21, 1203:23, 1204:4, 1204:9, 1204:14, 1293:4, 1356:3, 1369:13
resolution [10] - 1176:21, 1177:16, 1178:5, 1180:20, 1224:14, 1224:20, 1226:9, 1228:11, 1228:15, 1228:18
resolutions [1] - 1226:23
resolved [1] - 1364:22
resource [1] - 1234:15
respect [30] - 1156:7, 1157:4, 1163:16, 1170:7, 1170:24, 1172:24, 1178:24, 1180:24, 1181:5, 1185:19, 1238:6, 1246:13, 1246:21, 1268:16, 1291:3, 1291:9, 1315:1, 1317:5, 1320:13, 1328:13, 1329:3, 1332:24, 1338:6,

1359:10, 1360:2, 1360:7, 1360:18, 1360:22, 1363:6, 1371:3
respond [2] - 1273:21, 1287:15
responded [2] - 1287:14, 1346:1
responding [1] - 1362:1
responds [1] - 1363:3
response [5] - 1207:4, 1213:2, 1285:9, 1286:7, 1328:11
rest [4] - 1205:20, 1357:9, 1361:12, 1371:5
restaurant [2] - 1243:3, 1332:22
restaurants [1] - 1242:24
rested [2] - 1357:5, 1357:8
resting [1] - 1361:18
rests [4] - 1357:11, 1367:3, 1368:23, 1368:24
result [7] - 1185:1, 1319:11, 1323:15, 1323:20, 1334:11, 1353:12, 1370:7
resulted [1] - 1323:13
results [8] - 1159:20, 1168:18, 1249:20, 1307:1, 1322:14, 1322:18, 1323:9, 1348:19
resume [2] - 1167:13, 1260:15
retain [1] - 1164:7
retained [2] - 1164:8, 1214:9
retrieval [2] - 1205:9, 1210:11
retrieve [1] - 1205:15
retrieved [1] - 1253:1
retrieving [1] - 1206:22
return [2] - 1206:10, 1355:4
returned [1] - 1361:22
reuse [1] - 1351:11
Revenue [1] - 1317:6
revenue [102] - 1262:21, 1283:19, 1284:13, 1284:17, 1289:3, 1289:5, 1300:2, 1305:5, 1305:9, 1305:10, 1305:12, 1305:15,

1305:24, 1306:3, 1306:6, 1306:13, 1306:14, 1307:2, 1307:3, 1307:6, 1309:3, 1310:17, 1310:18, 1310:24, 1311:2, 1311:4, 1311:5, 1311:8, 1311:10, 1312:8, 1313:3, 1313:6, 1313:9, 1313:10, 1313:11, 1313:18, 1313:19, 1313:20, 1313:23, 1313:24, 1314:5, 1314:10, 1314:14, 1314:15, 1314:18, 1314:22, 1315:4, 1315:18, 1316:9, 1316:10, 1316:12, 1316:20, 1316:24, 1317:4, 1317:8, 1317:14, 1317:19, 1317:24, 1318:8, 1318:9, 1318:13, 1318:18, 1319:2, 1319:18, 1319:21, 1319:23, 1320:5, 1320:9, 1321:14, 1322:23, 1323:2, 1323:14, 1324:12, 1324:22, 1325:8, 1337:11, 1337:19, 1337:22, 1338:13, 1339:6, 1339:7, 1339:13, 1339:17, 1341:11, 1341:12, 1341:21, 1341:24, 1342:5, 1342:10, 1342:16, 1342:19, 1343:2, 1343:3, 1343:6, 1343:12, 1343:15, 1348:19, 1352:19, 1353:11, 1353:16

revenues [9] - 1277:14, 1312:3, 1314:12, 1315:14, 1332:15, 1333:7, 1336:15, 1348:16, 1349:9

reverse [1] - 1235:12

review [6] - 1249:7, 1288:19, 1309:6, 1310:11, 1326:20, 1347:11

reviewed [9] - 1171:18, 1189:22, 1199:16, 1216:16, 1234:21, 1248:6, 1248:9, 1328:10, 1349:16

revised [1] - 1364:6
revisions [1] - 1364:9
right-hand [1] - 1172:10
rights [2] - 1296:7, 1296:8
rise [9] - 1277:10, 1281:10, 1309:2, 1310:16, 1319:1, 1338:1, 1340:7, 1341:18, 1342:3
RMR [1] - 1372:20
roam [1] - 1197:3
Robinson [1] - 1161:15
Rokach [3] - 1272:22, 1308:1, 1310:6
room [4] - 1197:23, 1365:21, 1366:1
ROONEY [1] - 1154:23
Rous [3] - 1171:16, 1171:19, 1172:4
routines [2] - 1246:20, 1247:11
Rover [1] - 1269:2
royalties [3] - 1270:11, 1281:14, 1299:3
royalty [76] - 1265:18, 1270:7, 1270:14, 1274:6, 1274:8, 1274:16, 1275:9, 1275:11, 1276:24, 1277:3, 1277:21, 1277:23, 1278:2, 1278:6, 1278:9, 1278:17, 1278:19, 1279:2, 1279:6, 1279:19, 1280:2, 1281:11, 1283:17, 1284:10, 1284:15, 1286:22, 1289:10, 1294:14, 1297:4, 1297:7, 1300:3, 1309:4, 1310:16, 1310:18, 1310:24, 1311:9, 1312:3, 1312:6, 1312:10, 1318:18, 1319:19, 1320:10, 1321:14, 1321:20, 1321:22, 1321:24, 1322:6, 1322:19, 1322:24, 1323:5, 1323:12, 1323:18, 1323:23, 1325:7, 1330:19, 1330:22, 1331:1, 1331:2, 1331:17, 1331:20, 1335:6,

1337:8, 1337:10, 1337:16, 1337:21, 1337:24, 1338:6, 1338:8, 1343:21, 1344:2, 1345:24, 1346:10, 1352:6, 1352:8, 1354:1
Rule [4] - 1160:22, 1357:13, 1370:4, 1371:2
rule [1] - 1331:1
Rules [1] - 1370:5
rules [1] - 1179:7
run [2] - 1163:5, 1303:8
running [3] - 1299:3, 1338:1, 1346:9
sale [1] - 1159:2
sales [2] - 1277:10, 1277:13
San [2] - 1269:24
sat [2] - 1237:18, 1237:19
satellites [1] - 1300:19
satisfactory [1] - 1160:9
save [1] - 1264:20
saving [1] - 1250:23
savings [13] - 1309:3, 1309:17, 1310:8, 1311:5, 1314:16, 1314:18, 1318:20, 1319:1, 1319:2, 1332:15, 1336:16, 1343:9, 1353:5
saw [5] - 1175:4, 1198:1, 1288:24, 1324:11, 1327:7
scalable [1] - 1204:6
scaled [2] - 1197:17, 1197:19
scenario [1] - 1342:6
scenarios [1] - 1342:16
Schmidt [1] - 1218:20
school [1] - 1267:21
Science [1] - 1193:17
sciences [1] - 1191:16
scope [4] - 1288:4, 1288:6, 1288:8
SCOTT [1] - 1154:21
screen [8] - 1230:5, 1250:4, 1252:9, 1252:14, 1253:2, 1261:4, 1292:3, 1292:5
scribed [1] - 1304:5
seal [1] - 1372:15
seamless [1] - 1226:3

1308:12, 1308:14, 1348:20, 1350:5
searches [2] - 1348:15, 1353:12
searching [1] - 1301:5
seated [9] - 1156:1, 1167:14, 1168:2, 1260:18, 1261:12, 1356:7, 1357:1, 1366:24, 1369:20
second [25] - 1157:4, 1164:3, 1169:6, 1171:6, 1179:6, 1191:19, 1191:23, 1200:10, 1201:9, 1212:7, 1212:24, 1213:1, 1225:7, 1251:12, 1252:10, 1252:12, 1253:3, 1313:14, 1313:17, 1342:17, 1342:18, 1362:5, 1362:13, 1362:19, 1368:5
secondary [1] - 1186:14
secondly [1] - 1245:2
secret [2] - 1239:12, 1243:15
section [6] - 1172:20, 1173:21, 1211:6, 1211:13, 1221:17, 1350:19
Section [1] - 1179:7
sections [11] - 1174:15, 1177:13, 1178:14, 1179:14, 1224:13, 1224:21, 1226:8, 1227:10, 1228:10, 1228:14, 1233:9
see [54] - 1164:10, 1164:13, 1171:15, 1176:12, 1180:6, 1180:16, 1201:19, 1202:8, 1204:22, 1206:23, 1208:16, 1216:11, 1220:4, 1224:9, 1225:5, 1225:17, 1228:7, 1231:24, 1233:15, 1239:22, 1240:9, 1250:15, 1252:22, 1260:7, 1265:3, 1269:11, 1282:24, 1288:20, 1293:13, 1303:9, 1305:15, 1306:20, 1307:1, 1309:21, 1314:6, 1316:23, 1317:6, 1333:12, 1339:7,

1340:6, 1347:5, 1349:2, 1350:3, 1350:5, 1350:19, 1350:20, 1354:18, 1362:11, 1368:10, 1369:10, 1369:17, 1371:11
seeking [1] - 1275:1
seemless [1] - 1178:14
select [2] - 1207:9, 1341:20
selecting [1] - 1341:19
sell [11] - 1262:12, 1262:15, 1262:23, 1263:1, 1263:4, 1263:6, 1284:23, 1284:24, 1299:16, 1324:19, 1325:9
selling [3] - 1263:12, 1277:7, 1286:15
sells [2] - 1315:9, 1354:8
send [1] - 1178:19
sense [3] - 1258:17, 1299:17, 1363:19
sent [3] - 1282:5, 1287:12, 1287:13
sentence [8] - 1176:16, 1210:8, 1210:10, 1210:15, 1211:13, 1226:11, 1226:21, 1227:2
separate [1] - 1364:11
September [2] - 1259:9, 1261:19
series [1] - 1245:20
server [1] - 1253:1
servers [4] - 1197:19, 1201:17, 1300:17, 1368:3
service [1] - 1263:17
services [5] - 1187:10, 1187:15, 1187:18, 1187:19, 1352:20
session [4] - 1333:20, 1338:6, 1338:8, 1344:1
sessions [3] - 1333:14, 1333:17, 1336:20
set [14] - 1156:13, 1165:5, 1165:9, 1180:14, 1196:23, 1214:23, 1234:19, 1238:4, 1242:4, 1267:4, 1301:12, 1365:10, 1371:4, 1372:14

1215:14
speaks [1] - 1221:20
spears [1] - 1367:5
SPEARS [39] -
1154:22, 1161:12,
1161:14, 1162:1,
1163:7, 1164:10,
1186:5, 1186:20,
1186:23, 1187:4,
1192:18, 1221:15,
1237:2, 1237:3,
1237:10, 1237:14,
1237:17, 1249:3,
1250:13, 1251:4,
1251:10, 1251:23,
1253:22, 1254:12,
1254:15, 1259:17,
1357:5, 1357:12,
1361:15, 1362:5,
1362:13, 1364:2,
1366:8, 1366:12,
1366:19, 1367:7,
1367:15, 1368:14,
1368:23
Spears [4] - 1161:10,
1186:11, 1357:3,
1362:8
special [2] - 1208:14,
1304:8
specialize [1] -
1266:17
specific [5] - 1172:24,
1193:3, 1247:10,
1276:19, 1358:21
specifically [9] -
1189:16, 1218:22,
1247:17, 1259:22,
1333:10, 1333:12,
1348:6, 1348:16,
1357:15
specification [2] -
1207:20, 1233:2
specifies [2] -
1172:22, 1345:18
specify [1] - 1343:23
speech [3] - 1193:16,
1193:19, 1193:23
speed [5] - 1175:3,
1175:7, 1204:6,
1252:8, 1368:6
speeding [1] -
1207:17
spell [1] - 1265:21
spent [3] - 1189:15,
1248:2, 1248:4
spite [1] - 1303:10
spoken [2] - 1196:16,
1263:8
spread [1] - 1333:13
spreadsheet [1] -

1316:5
SRI [38] - 1168:16,
1168:19, 1169:1,
1169:10, 1170:9,
1170:16, 1188:23,
1189:15, 1189:19,
1190:2, 1190:7,
1190:11, 1190:14,
1192:3, 1193:8,
1196:14, 1196:22,
1197:24, 1198:6,
1198:19, 1199:13,
1199:17, 1200:1,
1200:11, 1200:20,
1205:3, 1207:12,
1207:22, 1208:12,
1216:17, 1217:2,
1263:20, 1263:24,
1264:24, 1359:6,
1359:20, 1360:3,
1370:13
SRI's [3] - 1185:21,
1193:3, 1264:17
stable [1] - 1351:17
staff [1] - 1273:13
stamp [1] - 1219:18
stand [8] - 1160:18,
1161:13, 1167:19,
1190:2, 1190:4,
1264:4, 1265:20,
1363:2
standard [1] - 1184:23
standpoint [2] -
1299:2, 1324:16
Stanford [24] -
1290:18, 1291:9,
1291:13, 1291:17,
1291:20, 1294:3,
1294:12, 1294:18,
1295:8, 1295:12,
1295:20, 1296:2,
1296:6, 1296:9,
1296:10, 1296:21,
1297:6, 1297:14,
1297:22, 1298:8,
1324:6, 1327:9,
1328:7, 1328:16
Stark [1] - 1365:20
start [10] - 1202:6,
1212:10, 1229:1,
1256:17, 1290:10,
1325:18, 1344:8,
1350:18, 1351:7,
1362:11
started [2] - 1303:14,
1325:15
starting [4] - 1281:2,
1317:13, 1317:22,
1336:7
starts [3] - 1210:10,

1222:13, 1368:11
State [2] - 1270:1,
1372:1
state [4] - 1195:6,
1208:13, 1265:21,
1293:15
statement [3] -
1210:13, 1228:4,
1345:6
statements [1] -
1319:16
states [2] - 1201:13,
1219:23
STATES [1] - 1154:1
States [1] - 1154:14
stating [1] - 1359:22
statute [5] - 1275:6,
1311:14, 1331:5,
1343:21, 1352:1
statutes [1] - 1333:11
statutory [1] - 1331:10
stay [1] - 1351:17
stenographic [1] -
1372:11
step [52] - 1174:12,
1176:2, 1201:10,
1206:15, 1208:9,
1210:4, 1229:6,
1229:10, 1229:15,
1229:19, 1232:22,
1233:2, 1233:7,
1243:19, 1243:20,
1243:22, 1243:23,
1243:24, 1244:5,
1244:9, 1244:10,
1244:13, 1244:17,
1244:20, 1244:22,
1244:23, 1245:2,
1245:3, 1245:4,
1245:7, 1245:8,
1277:1, 1310:12,
1310:14, 1310:20,
1312:5, 1312:7,
1315:22, 1318:2,
1320:5, 1320:7,
1321:10, 1321:18,
1321:20, 1322:10,
1322:12, 1362:19,
1368:9, 1368:12
Step [8] - 1176:4,
1222:9, 1234:13,
1238:6, 1238:17,
1241:6, 1357:17,
1357:21
Stephen [1] - 1189:3
Steps [6] - 1177:5,
1177:7, 1177:21,
1178:12, 1211:3,
1357:21
steps [17] - 1177:8,

1177:22, 1204:24,
1209:15, 1225:10,
1225:23, 1246:13,
1246:21, 1251:16,
1251:22, 1252:6,
1357:14, 1357:16,
1366:10, 1366:16,
1367:17
still [6] - 1159:23,
1168:1, 1186:23,
1332:11, 1344:10,
1367:13
stipulate [1] - 1163:3
stop [5] - 1225:14,
1227:9, 1258:3,
1259:11, 1351:1
stopped [2] - 1258:7,
1281:21
storage [4] - 1195:11,
1196:2, 1204:7,
1211:8
stored [1] - 1177:17
storing [6] - 1174:10,
1177:10, 1178:1,
1208:10, 1250:24,
1253:6
strategy [1] - 1258:18
Street [1] - 1154:11
StreetView [3] -
1291:18, 1294:19,
1294:23
stretch [1] - 1214:6
strong [3] - 1161:16,
1298:23, 1307:3
structure [24] -
1226:14, 1274:6,
1274:9, 1278:19,
1286:22, 1290:15,
1290:17, 1294:10,
1294:13, 1297:13,
1297:17, 1297:18,
1297:21, 1298:2,
1298:4, 1298:13,
1298:14, 1298:22,
1298:24, 1299:12,
1299:16, 1332:2,
1338:2
structures [1] -
1229:21
study [1] - 1307:16
stuff [3] - 1159:24,
1210:19, 1264:20
subdivided [2] -
1224:10, 1224:13
subdivision [1] -
1224:19
subject [6] - 1180:14,
1181:12, 1183:1,
1183:4, 1254:1,
1292:21

submit [1] - 1165:9
submitted [5] -
1165:11, 1167:3,
1219:5, 1259:23,
1272:14
subscribed [1] -
1304:9
subscribers [4] -
1303:16, 1303:22,
1303:24, 1304:3
subsequent [1] -
1253:14
subservers [1] -
1269:7
substantial [1] -
1320:3
substantially [1] -
1324:7
subtract [2] - 1315:24,
1316:8
subtracted [2] -
1313:12, 1316:3
success [1] - 1305:16
successful [1] -
1305:3
sufficient [2] -
1185:24, 1200:4
suggest [5] - 1158:10,
1163:17, 1165:18,
1297:1, 1365:12
suggested [2] -
1325:7, 1346:2
suggesting [6] -
1283:11, 1283:16,
1284:14, 1310:24,
1334:3
suggestion [5] -
1284:16, 1284:22,
1289:2, 1321:24,
1324:21
suggestions [4] -
1164:23, 1299:15,
1307:13, 1325:8
suit [2] - 1274:10,
1359:2
sum [39] - 1185:5,
1274:9, 1274:16,
1294:4, 1294:11,
1297:21, 1298:2,
1298:4, 1298:7,
1298:13, 1298:22,
1298:23, 1299:5,
1299:12, 1299:15,
1299:18, 1311:11,
1323:1, 1323:8,
1323:24, 1331:20,
1332:3, 1332:13,
1332:16, 1332:17,
1335:15, 1337:2,
1337:4, 1337:10,

1338:2, 1338:5,
1345:16, 1345:19,
1345:21, 1346:3,
1346:10, 1346:20,
1347:1, 1348:6
summarize [2] -
1315:15, 1324:2
summary [4] - 1173:1,
1190:16, 1213:19,
1274:3
sums [1] - 1325:9
super [1] - 1201:14
Superior [1] - 1161:17
supplementation [1] -
1358:9
support [7] - 1200:4,
1238:5, 1238:16,
1246:20, 1247:11,
1358:24, 1359:9
supports [1] - 1246:12
surprisingly [2] -
1173:9, 1178:7
surrebuttal [2] -
1363:7, 1363:11
swear [2] - 1367:10,
1367:11
sworn [1] - 1266:4
syntax [3] - 1211:5,
1211:6, 1211:15
system [40] - 1168:16,
1168:19, 1168:21,
1169:2, 1169:11,
1169:18, 1170:10,
1170:16, 1175:13,
1175:17, 1175:19,
1175:20, 1177:1,
1177:17, 1183:6,
1183:7, 1185:21,
1188:23, 1189:2,
1197:2, 1200:21,
1201:16, 1204:7,
1204:17, 1204:18,
1206:6, 1215:3,
1216:11, 1218:2,
1218:7, 1218:17,
1219:2, 1263:20,
1263:24, 1265:1,
1265:3, 1358:13,
1358:17, 1370:14
T-Vision [6] - 1171:12,
1172:18, 1172:24,
1173:15, 1211:19,
1370:14
T_Vision [56] -
1174:12, 1174:19,
1174:21, 1175:13,
1175:19, 1175:20,
1175:23, 1176:5,
1176:18, 1176:23,
1177:6, 1177:20,

1178:3, 1178:8,
1178:11, 1179:1,
1179:4, 1179:9,
1179:24, 1180:2,
1180:12, 1181:3,
1181:8, 1181:11,
1181:16, 1181:23,
1182:14, 1182:18,
1183:3, 1183:8,
1183:13, 1184:3,
1184:7, 1184:14,
1185:8, 1185:10,
1185:12, 1185:14,
1213:6, 1219:1,
1219:8, 1219:12,
1219:23, 1220:7,
1220:22, 1221:2,
1221:18, 1222:9,
1224:1, 1224:6,
1225:23, 1227:23,
1258:24, 1262:18,
1358:4, 1360:8
tab [2] - 1191:5,
1194:9
table [5] - 1158:8,
1159:18, 1159:24,
1245:5, 1279:16
talks [2] - 1173:19,
1174:15
task [2] - 1216:10,
1330:18
teaching [3] -
1183:13, 1267:16,
1267:17
team [2] - 1173:7,
1273:16
tech [2] - 1239:11,
1269:11
technical [24] -
1187:5, 1194:24,
1195:23, 1196:15,
1200:11, 1205:3,
1249:2, 1259:24,
1271:14, 1271:22,
1272:15, 1326:6,
1326:13, 1326:15,
1326:22, 1328:15,
1328:16, 1328:24,
1329:19, 1329:24,
1348:7, 1359:7,
1359:13
technically [8] -
1193:18, 1260:4,
1293:21, 1294:21,
1326:10, 1328:8,
1328:17, 1347:16
technique [1] - 1323:7
technological [1] -
1290:23
technologically [2] -

1292:12, 1292:16
technologies [1] -
1269:1
technology [19] -
1161:1, 1185:3,
1194:24, 1269:4,
1281:9, 1287:19,
1290:6, 1290:7,
1294:24, 1295:10,
1300:12, 1300:24,
1311:22, 1320:19,
1321:6, 1328:7,
1330:1, 1348:5,
1354:11
televisions [1] -
1269:8
ten [3] - 1309:14,
1309:15, 1356:15
tens [2] - 1197:4,
1197:14
term [5] - 1193:2,
1221:20, 1275:4,
1288:4, 1298:9
terminated [2] -
1305:1, 1305:2
terms [15] - 1176:9,
1263:11, 1291:1,
1295:15, 1304:3,
1305:23, 1306:2,
1327:14, 1328:19,
1331:10, 1332:7,
1332:20, 1344:12,
1344:23, 1356:8
terrain [8] - 1197:3,
1203:24, 1204:1,
1206:20, 1207:4,
1207:13, 1209:22,
1211:1
TerraVision [61] -
1168:16, 1168:19,
1168:21, 1169:2,
1169:11, 1169:18,
1170:10, 1170:16,
1185:21, 1188:22,
1189:15, 1189:19,
1190:2, 1190:8,
1190:11, 1192:4,
1193:4, 1196:7,
1196:23, 1197:13,
1198:2, 1198:19,
1199:13, 1199:17,
1200:1, 1200:20,
1201:14, 1205:8,
1206:6, 1207:13,
1207:22, 1210:10,
1210:13, 1210:19,
1210:23, 1211:19,
1213:1, 1216:17,
1217:2, 1217:3,
1217:24, 1218:2,

1218:24, 1262:11,
1262:13, 1262:24,
1263:2, 1263:5,
1263:6, 1263:20,
1263:24, 1264:17,
1265:1, 1265:4,
1358:13, 1358:17,
1359:20, 1360:3,
1370:13
tested [1] - 1233:14
testified [24] - 1170:8,
1182:6, 1189:4,
1190:14, 1234:7,
1266:5, 1269:13,
1269:19, 1269:23,
1270:2, 1270:7,
1270:16, 1270:17,
1292:10, 1292:12,
1298:18, 1305:10,
1328:7, 1329:18,
1331:19, 1344:5,
1349:5, 1361:22
testify [19] - 1191:3,
1218:5, 1254:24,
1260:1, 1260:10,
1265:17, 1272:22,
1292:18, 1293:3,
1293:12, 1327:15,
1327:17, 1327:20,
1327:23, 1328:2,
1333:19, 1337:7,
1344:7
testifying [3] -
1235:19, 1273:20,
1292:20
testimonies [1] -
1218:13
testimony [93] -
1158:13, 1160:19,
1161:4, 1162:13,
1162:19, 1163:2,
1168:9, 1168:12,
1171:15, 1171:19,
1171:23, 1172:4,
1175:11, 1175:21,
1186:11, 1187:12,
1189:7, 1190:4,
1198:3, 1198:12,
1198:23, 1200:7,
1207:2, 1217:10,
1218:21, 1227:22,
1234:16, 1235:2,
1235:14, 1236:7,
1236:9, 1236:14,
1236:22, 1247:6,
1247:9, 1248:9,
1248:15, 1248:22,
1249:24, 1253:10,
1253:14, 1254:6,
1255:2, 1259:20,

1259:21, 1261:2,
1261:16, 1267:6,
1268:16, 1268:19,
1272:6, 1273:1,
1275:14, 1276:17,
1285:10, 1286:12,
1287:11, 1293:14,
1298:17, 1307:16,
1310:5, 1327:1,
1327:2, 1327:4,
1327:7, 1327:8,
1328:4, 1328:15,
1328:23, 1329:7,
1337:1, 1339:18,
1344:13, 1345:3,
1345:22, 1346:15,
1347:4, 1347:5,
1347:10, 1347:11,
1348:10, 1349:14,
1349:17, 1349:23,
1351:15, 1351:21,
1352:2, 1352:7,
1353:19, 1353:22,
1356:10, 1358:21,
1369:4
testing [1] - 1233:24
TexArkana [2] -
1270:4
Texas [1] - 1270:2
text [16] - 1191:24,
1194:20, 1206:18,
1208:9, 1209:15,
1210:2, 1222:8,
1222:12, 1223:12,
1223:17, 1223:18,
1225:22, 1226:7,
1227:8, 1227:18,
1351:4
texture [2] - 1208:14,
1208:23
than.1 [1] - 1304:6
THE [119] - 1154:1,
1154:2, 1154:13,
1156:1, 1158:18,
1159:9, 1159:16,
1160:4, 1160:9,
1160:12, 1161:3,
1161:8, 1161:13,
1161:21, 1162:2,
1162:17, 1163:13,
1164:3, 1164:17,
1165:13, 1166:7,
1166:12, 1166:23,
1167:10, 1167:12,
1167:14, 1167:20,
1167:23, 1186:7,
1186:10, 1186:19,
1186:22, 1187:2,
1188:10, 1188:16,
1188:19, 1192:16,

1199:4, 1221:13,
1236:24, 1237:8,
1237:12, 1250:12,
1250:15, 1250:20,
1251:8, 1251:12,
1251:20, 1252:1,
1252:2, 1252:7,
1253:3, 1253:8,
1253:19, 1253:23,
1254:3, 1254:13,
1254:19, 1258:16,
1259:11, 1259:15,
1260:7, 1260:14,
1260:18, 1261:5,
1261:9, 1261:12,
1265:10, 1265:20,
1265:21, 1265:23,
1266:8, 1290:1,
1290:2, 1291:23,
1292:6, 1292:23,
1293:9, 1293:17,
1293:22, 1325:17,
1325:22, 1354:18,
1354:24, 1355:5,
1355:15, 1355:19,
1355:23, 1356:7,
1356:17, 1356:21,
1357:1, 1360:10,
1360:19, 1361:3,
1361:10, 1362:3,
1362:11, 1363:8,
1363:12, 1363:24,
1364:15, 1365:6,
1365:14, 1365:19,
1366:3, 1366:9,
1366:18, 1366:23,
1367:4, 1367:10,
1367:14, 1368:17,
1369:2, 1369:20,
1370:2, 1370:23,
1371:7, 1371:10
therefore [3] - 1207:9,
1255:15, 1258:6
they've [1] - 1292:2
thinking [4] - 1201:14,
1212:11, 1247:21,
1331:12
third [1] - 1343:6
thirty [1] - 1268:6
thirty-two [1] - 1268:6
thousands [1] -
1248:6
three [32] - 1157:23,
1157:24, 1158:22,
1159:1, 1159:2,
1159:4, 1162:18,
1163:1, 1174:14,
1174:18, 1177:8,
1201:3, 1201:18,
1214:23, 1223:12,

1266:24, 1269:22,
1283:18, 1286:11,
1286:13, 1286:24,
1287:16, 1289:2,
1289:4, 1311:2,
1324:6, 1324:20,
1325:7, 1325:10,
1344:21, 1350:15
threshold [1] -
1239:22
throw [1] - 1219:24
thrown [1] - 1250:3
Thursday [1] - 1154:9
tie [1] - 1274:23
tile [3] - 1208:13,
1208:18, 1208:23
tiles [5] - 1180:19,
1180:20, 1232:22,
1232:24, 1252:24
timeline [3] - 1172:2,
1172:7, 1172:8
timing [2] - 1158:15,
1283:7
TIMOTHY [2] -
1154:13, 1154:23
title [7] - 1159:20,
1191:14, 1202:13,
1255:5, 1255:13,
1255:17, 1350:4
today [8] - 1190:13,
1256:8, 1267:6,
1268:2, 1327:3,
1342:14, 1356:10,
1369:10
today's [1] - 1194:24
together [8] - 1165:5,
1165:20, 1165:23,
1226:16, 1260:19,
1279:24, 1322:13
tomorrow [5] -
1156:12, 1185:17,
1369:8, 1369:11,
1369:17
tonight [2] - 1156:9,
1156:10
took [6] - 1198:6,
1200:11, 1283:8,
1312:6, 1313:9,
1314:9
Toolbar [13] - 1308:4,
1308:7, 1308:12,
1309:13, 1310:7,
1311:6, 1314:17,
1318:20, 1318:22,
1336:16, 1343:5,
1343:7, 1353:5
tools [1] - 1269:9
top [5] - 1220:21,
1269:22, 1323:1,
1350:2, 1350:4

toss [1] - 1164:13
total [8] - 1299:8,
1302:19, 1303:21,
1312:10, 1315:17,
1316:9, 1319:17,
1323:2
totaled [1] - 1315:19
totality [1] - 1314:19
towards [1] - 1168:11
Toyota [2] - 1268:22,
1268:23
track [1] - 1162:23
Trademark [4] -
1188:2, 1188:6,
1188:12, 1212:21
traffic [1] - 1351:12
transcript [8] -
1156:15, 1156:24,
1163:18, 1215:8,
1215:20, 1216:15,
1216:19, 1372:11
transformation [1] -
1183:23
transformations [2] -
1183:11, 1183:22
transforming [1] -
1183:6
translate [1] - 1255:10
trash [1] - 1164:14
traversal [1] - 1230:6
traversed [1] -
1229:22
treated [1] - 1319:2
tree [5] - 1178:19,
1180:5, 1228:6,
1233:19, 1367:24
trial [32] - 1156:15,
1156:23, 1160:18,
1164:12, 1171:20,
1175:12, 1191:5,
1194:8, 1196:10,
1211:24, 1214:1,
1218:13, 1219:13,
1229:13, 1235:23,
1236:1, 1237:20,
1253:10, 1254:16,
1268:17, 1269:13,
1270:16, 1272:13,
1272:24, 1273:1,
1347:6, 1347:9,
1347:24, 1359:5,
1359:9, 1359:17,
1359:18
Trial [6] - 1154:3,
1201:2, 1205:2,
1206:11, 1230:8,
1349:24
trigger [1] - 1351:11
true [4] - 1235:13,
1332:24, 1333:2,

1372:10
try [5] - 1251:20,
1263:12, 1334:21,
1336:6, 1339:15
trying [7] - 1225:9,
1225:11, 1233:12,
1244:16, 1299:3,
1304:20, 1340:6
TUNNELL [1] - 1155:4
turn [18] - 1191:5,
1191:12, 1191:18,
1194:7, 1196:10,
1196:18, 1201:3,
1215:10, 1215:15,
1216:17, 1220:10,
1230:8, 1231:4,
1240:2, 1270:22,
1350:1, 1350:15,
1351:11
turning [1] - 1173:10
twenty [1] - 1356:18
twenty-five [1] -
1356:18
two [39] - 1164:20,
1171:7, 1177:22,
1178:14, 1180:24,
1185:1, 1185:24,
1192:11, 1192:20,
1202:7, 1203:15,
1204:1, 1233:18,
1244:24, 1249:6,
1252:2, 1252:4,
1267:18, 1268:6,
1279:24, 1290:13,
1298:15, 1302:16,
1306:3, 1311:9,
1316:6, 1318:5,
1318:14, 1321:15,
1322:6, 1322:18,
1323:4, 1337:20,
1337:24, 1346:11,
1361:22, 1362:4,
1362:9, 1363:4
Tyler [1] - 1270:5
type [3] - 1205:17,
1278:1, 1337:7
types [3] - 1257:13,
1269:4, 1326:21
typical [1] - 1283:12
typically [4] - 1281:4,
1281:13, 1285:23,
1330:13
U.S [9] - 1201:21,
1269:16, 1269:18,
1270:9, 1316:9,
1317:6, 1317:9,
1318:24, 1319:11
UCLA [2] - 1267:14,
1267:17
ultimate [2] - 1172:17,

1199:21
ultimately [8] -
1278:18, 1288:16,
1307:23, 1310:18,
1311:3, 1311:7,
1321:15, 1323:16
unclear [1] - 1163:2
under [24] - 1160:22,
1168:1, 1194:18,
1203:20, 1208:11,
1218:2, 1219:20,
1259:1, 1260:3,
1275:5, 1287:9,
1295:14, 1323:9,
1336:12, 1342:12,
1342:15, 1343:16,
1343:18, 1344:2,
1345:19, 1350:16,
1354:3, 1357:13,
1367:13
underlining [1] -
1222:4
understood [7] -
1160:2, 1203:14,
1214:7, 1244:21,
1248:24, 1344:13,
1364:8
undertaken [1] -
1360:4
undertaking [1] -
1360:4
unforgivable [1] -
1174:3
unimportant [1] -
1181:18
UNITED [1] - 1154:1
United [1] - 1154:14
University [1] -
1267:12
unless [4] - 1166:23,
1241:10, 1325:18,
1361:12
unpredictable [1] -
1207:10
unrebutted [2] -
1370:10, 1370:17
unrefuted [1] -
1357:17
up [73] - 1157:14,
1161:13, 1162:8,
1162:16, 1163:24,
1164:2, 1164:19,
1165:1, 1185:5,
1196:19, 1197:19,
1198:22, 1201:8,
1204:20, 1206:9,
1206:15, 1207:17,
1208:9, 1209:11,
1209:14, 1210:3,
1221:24, 1222:8,

1223:23, 1224:1, 1225:22, 1229:1, 1233:20, 1238:3, 1238:21, 1238:22, 1244:6, 1245:22, 1246:10, 1250:3, 1274:9, 1274:12, 1291:23, 1292:3, 1292:5, 1293:2, 1294:4, 1294:11, 1297:21, 1298:2, 1298:4, 1298:7, 1298:8, 1298:13, 1299:13, 1299:15, 1304:22, 1311:12, 1313:14, 1318:6, 1323:24, 1330:3, 1331:21, 1331:23, 1332:3, 1334:2, 1334:12, 1335:15, 1345:16, 1348:20, 1349:24, 1350:2, 1350:5, 1350:17, 1359:12, 1363:5, 1367:23

upcoming [1] - 1259:20

US [15] - 1287:1, 1287:3, 1287:4, 1305:13, 1306:3, 1313:9, 1313:19, 1313:23, 1314:10, 1314:18, 1315:8, 1315:10, 1315:18, 1339:7, 1342:19

usage [3] - 1299:4, 1301:24, 1303:9

USC [1] - 1311:19

useful [1] - 1299:6

user [11] - 1180:18, 1205:10, 1207:3, 1207:8, 1207:19, 1210:12, 1211:7, 1227:5, 1252:10, 1252:13, 1252:16

user's [2] - 1177:16, 1182:17

users [4] - 1197:3, 1301:8, 1350:23, 1351:10

uses [5] - 1205:8, 1210:11, 1253:11, 1311:20, 1354:3

vague [1] - 1193:2

valid [10] - 1214:16, 1214:21, 1265:18, 1271:6, 1276:1, 1276:7, 1276:8, 1296:15, 1331:15, 1354:4

validity [6] - 1185:6, 1228:23, 1271:9, 1271:13, 1271:16, 1370:18

valuable [6] - 1284:6, 1285:23, 1288:22, 1289:7, 1295:15, 1296:11

valuation [1] - 1268:10

value [6] - 1240:19, 1293:14, 1297:1, 1323:6, 1354:9, 1354:11

variables [4] - 1246:20, 1247:3, 1247:11, 1247:18

variety [8] - 1164:24, 1269:10, 1272:12, 1290:21, 1294:9, 1298:24, 1301:18, 1313:5

various [5] - 1170:17, 1171:1, 1271:2, 1326:15, 1348:14

vast [1] - 1192:8

vehicles [4] - 1315:9, 1315:10, 1319:11, 1319:15

verdict [8] - 1156:24, 1260:21, 1357:13, 1358:3, 1358:11, 1359:4, 1359:16, 1364:6

verdicts [1] - 1364:11

version [19] - 1157:13, 1157:15, 1231:1, 1250:24, 1275:15, 1275:18, 1280:11, 1302:7, 1302:10, 1302:21, 1303:13, 1303:22, 1339:9, 1341:8, 1341:10, 1341:13, 1341:18, 1341:19, 1341:21

versions [10] - 1250:22, 1253:4, 1253:7, 1253:18, 1260:21, 1275:16, 1302:8, 1303:3, 1341:6, 1362:6

versus [1] - 1360:6

vice [2] - 1167:4, 1167:15

Vice [5] - 1193:15, 1193:18, 1193:23, 1194:4, 1194:22

Video [1] - 1255:4

video [12] - 1198:2, 1198:6, 1198:17,

1200:6, 1207:1, 1230:16, 1230:22, 1255:2, 1259:11, 1272:23, 1349:14

video) [1] - 1265:5

videotape [1] - 1261:16

view [27] - 1176:10, 1176:20, 1177:10, 1177:11, 1177:12, 1178:4, 1182:17, 1182:20, 1182:21, 1184:6, 1185:15, 1205:17, 1205:23, 1206:1, 1206:2, 1207:15, 1207:19, 1208:11, 1208:19, 1209:1, 1209:3, 1215:3, 1223:3, 1226:11, 1320:16, 1321:3, 1344:11

viewed [8] - 1271:5, 1279:1, 1290:5, 1294:21, 1296:19, 1335:12, 1337:19, 1348:7

viewing [4] - 1176:14, 1222:14, 1223:5, 1223:7

views [2] - 1161:16, 1300:22

virtual [1] - 1173:22

virtue [1] - 1333:8

vision [3] - 1193:24, 1194:4, 1194:23

Vision [6] - 1171:12, 1172:18, 1172:24, 1173:15, 1211:19, 1370:14

visit [2] - 1243:3, 1243:8

visualization [3] - 1173:22, 1203:24, 1204:2

visualizing [1] - 1211:10

visuals [1] - 1162:23

Vizio [1] - 1269:2

volume [1] - 1165:3

Volume [1] - 1154:3

voluminous [1] - 1165:10

wait [1] - 1365:4

waiting [1] - 1368:2

WAN [1] - 1202:23

WANs [1] - 1202:23

wants [2] - 1164:21, 1351:8

Warriors [1] - 1270:1

Washington [1] -

1311:23

wasting [2] - 1161:19, 1247:22

watched [2] - 1230:15, 1230:16

water [1] - 1320:21

ways [4] - 1164:24, 1184:23, 1249:10, 1283:7

web [1] - 1193:22

welcome [3] - 1168:5, 1261:13, 1366:23

well-known [2] - 1183:12, 1185:2

whatnot [1] - 1360:1

whereas [1] - 1305:21

WHEREOF [1] - 1372:14

whole [3] - 1197:14, 1245:20, 1264:15

wide [3] - 1202:24, 1269:10, 1272:2

wikki [2] - 1350:5, 1350:12

WILLIAMSON [35] - 1155:8, 1160:13, 1161:6, 1161:22, 1163:21, 1164:15, 1167:16, 1168:3, 1186:2, 1186:16, 1188:8, 1188:14, 1188:17, 1236:21, 1237:7, 1249:5, 1250:10, 1251:1, 1251:6, 1251:11, 1251:18, 1251:24, 1253:21, 1254:2, 1254:5, 1254:18, 1360:14, 1361:1, 1361:8, 1363:20, 1368:15, 1369:24, 1370:3, 1371:1, 1371:9

Williamson [1] - 1360:13

Williamson's [1] - 1163:10

willing [9] - 1174:5, 1279:14, 1282:7, 1285:14, 1295:20, 1295:23, 1295:24, 1331:17

willingly [1] - 1295:20

Wilmington [2] - 1154:12, 1372:16

withdraw [3] - 1196:5, 1232:18, 1237:15

WITNESS [9] - 1186:22, 1252:7, 1253:8, 1258:16,

1265:23, 1290:2, 1354:24, 1367:14, 1372:14

witness [22] - 1160:17, 1165:8, 1186:4, 1186:13, 1189:4, 1192:16, 1221:13, 1237:23, 1249:3, 1250:16, 1254:21, 1265:15, 1268:14, 1273:2, 1325:13, 1354:19, 1362:10, 1367:8, 1367:11, 1367:12, 1368:14

witness' [1] - 1236:22

witnesses [5] - 1163:16, 1248:10, 1248:15, 1272:18, 1272:23

wonderful [1] - 1340:7

word [6] - 1210:2, 1210:3, 1213:24, 1255:13, 1275:3, 1331:11

words [3] - 1177:17, 1178:6, 1178:20

workers [1] - 1198:6

works [3] - 1207:22, 1233:6, 1244:11

world [3] - 1175:4, 1315:10, 1335:21

worldwide [4] - 1174:22, 1174:24, 1303:6, 1303:11

worth [2] - 1198:8, 1287:1

write [2] - 1236:5, 1236:10

writers [1] - 1221:21

writing [1] - 1203:5

written [7] - 1162:24, 1173:7, 1193:19, 1194:4, 1194:13, 1220:1, 1366:13

wrote [15] - 1173:8, 1189:18, 1191:2, 1191:9, 1191:19, 1192:5, 1193:6, 1194:11, 1195:12, 1195:14, 1196:20, 1197:8, 1236:14, 1237:23, 1366:6

year [11] - 1172:12, 1172:16, 1172:22, 1194:12, 1250:22, 1253:5, 1258:7, 1303:13, 1323:12, 1337:22, 1338:1

yearly [1] - 1284:13